J. Burt,

Turning Axles.

No. 80,594. Patented Aug. 4, 1868.

Fig. 1

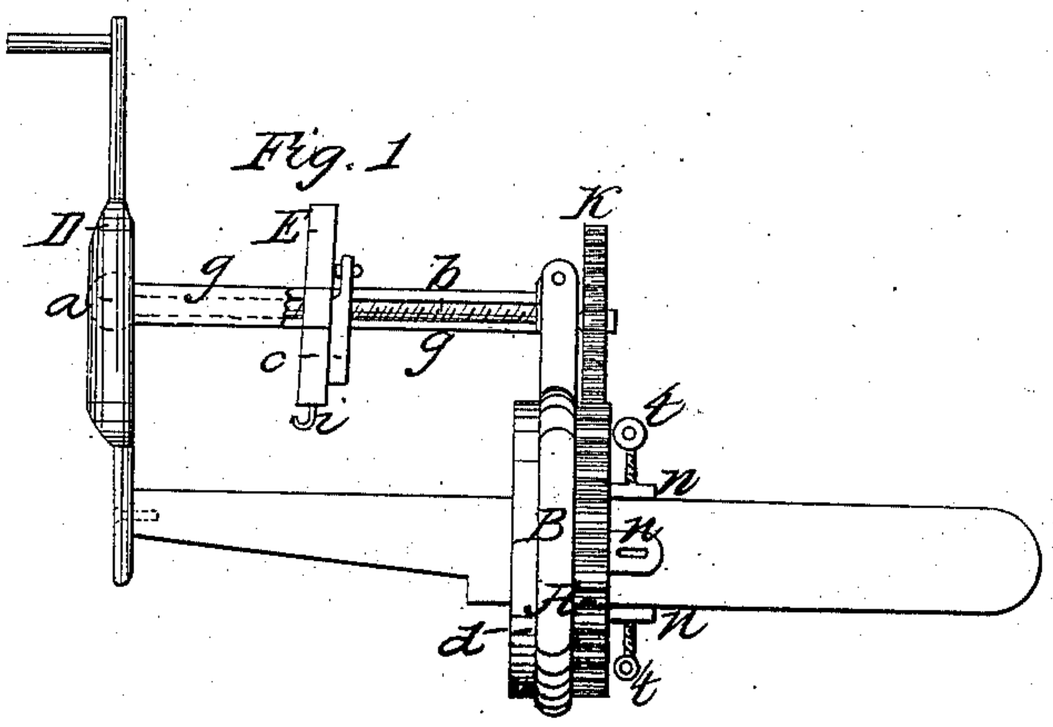


Fig. 4

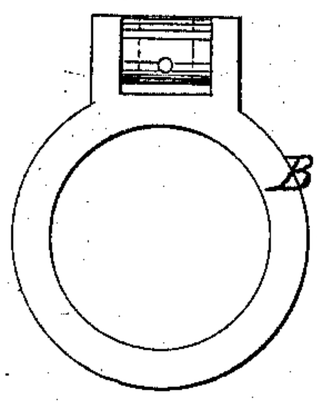


Fig. 2

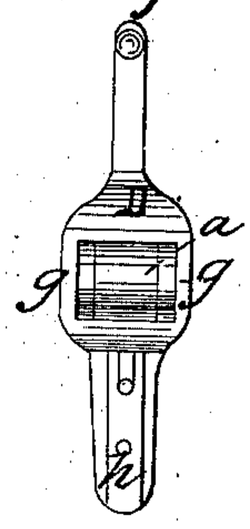
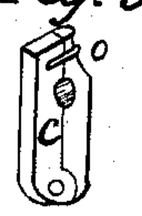


Fig. 3



Witnesses:

F. Lehmann

Jno A Ellis

Inventor:

Jno. Burt

per Alexander & Co

atty

United States Patent Office.

JOHN BURT, OF STURGIS, MICHIGAN.

Letters Patent No. 80,594, *dated August* 4, 1868.

IMPROVEMENT IN SKEIN-SETTERS FOR AXLES.

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, JOHN BURT, of Sturgis, in the State of Michigan, have invented certain new and useful Improvements in Thimble-Skein Setters; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawing, and to the letters of reference marked thereon, in which—

Figure 1 is a side elevation.

Figure 2, an end view of the crank-arrangement.

Figure 3, a perspective of the open nut, and

Figure 4 a view of the frame-wheel.

The object of this invention is to give any required taper to the wooden arm of an axle, and the nature of it consists, first, in the employment of an inclined ways, hinged at both ends, substantially in the manner hereinafter described; second, in the employment of a revolving screw-shaft, in combination with the sliding knife-block; also, in the employment and combination of such other devices as will be hereafter set forth.

To enable others skilled in the art to make and use my invention, I will now describe its construction and operation.

A represents a wheel, with a step formed on it, or, which would be the same thing in effect, a smaller wheel secured to it. Upon this step or smaller wheel revolves the frame-wheel B. The mode of constructing this wheel is shown in fig. 4. *d* is a stationary cog-wheel, secured to the step of wheel A, thus confining the frame-wheel in the position indicated in fig. 1.

D represents the crank, which is provided with a square hole, sufficiently large for one end of the ways *g g* and the rocking-box *a* to rest in. This rocking-box is pivoted between the ways *g g*, as fully shown in fig. 2. The opposite end of the ways is pivoted between the projections on frame-wheel B. The lower end of the crank, D, is provided with the slide *h*, for the purpose of regulating the degree of taper designed to be given to the arm of the axle. This feature will be now fully understood hereafter.

E represents the knife-block, to which is attached the adjustable knife *i*. Said knife should be curved, as seen in fig. 1. The block E slides upon the inclined ways *g g*, and is confined between them by means of slots cut in its sides.

b represents a screw-shaft, one end of which enters the rocking-box *a;* the other passes through the head of ways *g g*, and is securely attached to the planet-wheel *k*. This wheel revolves in and around the cog-wheel *d*.

c represents a divided nut. Said nut is hinged or pivoted, as seen in fig. 3, and is provided with the clamp *o*, for keeping it in gear with screw-shaft *b* while the machine is in operation. This nut is secured to the knife-block in the position indicated in fig. 1.

It should be observed that the screw-shaft passes loosely through the knife-block, the object of which will be more fully appreciated hereafter.

n n represent lugs, secured to the wheel *d*. Said lugs are provided with set-screws *t t*, for the purpose of firmly holding the axle. These lugs may be provided with hinges, which, in some respects, would be preferable to the mode of fastening represented in the drawings.

The operation of my machine is as follows: The axle is adjusted in the hole through the centre of wheels A B *d*, and is secured by means of a set-screw through the slide *h*, and the screws in lugs *n n*. The slide *h* is then so adjusted as to give the desired taper to the arm, the knife-block is pushed back against the crank, and the divided nut closed and fastened by the clamp. Motion is now given to the crank, causing the knife to revolve around the arm. The motion of the crank also revolves the planet-wheel, which turns the screw-shaft, and gradually forces the knife-block from the lower to the upper end of the arm, thus giving a uniform slant to it. By opening the divided nut, and sliding the knife-block back into its proper place, the machine is again ready for work.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The employment of the slide *h* in crank, D, for adjusting the arm, substantially as and for the purpose specified.

2. The ways *g g*, when hinged or pivoted at both ends, substantially as set forth, for the purpose of accommodating them to the set of the arm.

3. Providing the crank, D, with rocking-box *a*, and attaching screw-shaft *b* thereto, substantially as described.

4. Finally, wheel B, constructed substantially as set forth, in combination with hinged or pivoted ways *g g*, screw-shaft *b*, knife-block E, divided nut *e*, and crank, D, for the purpose described.

JOHN BURT.

Witnesses:

T. H. ALEXANDER,

JOHN A. ELLIS.