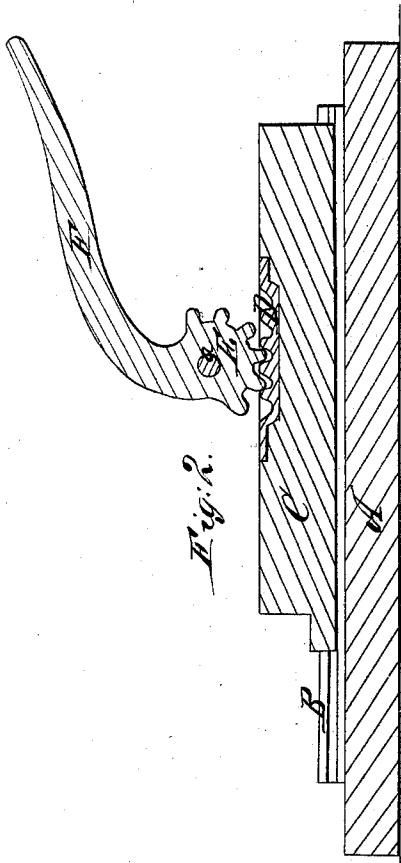


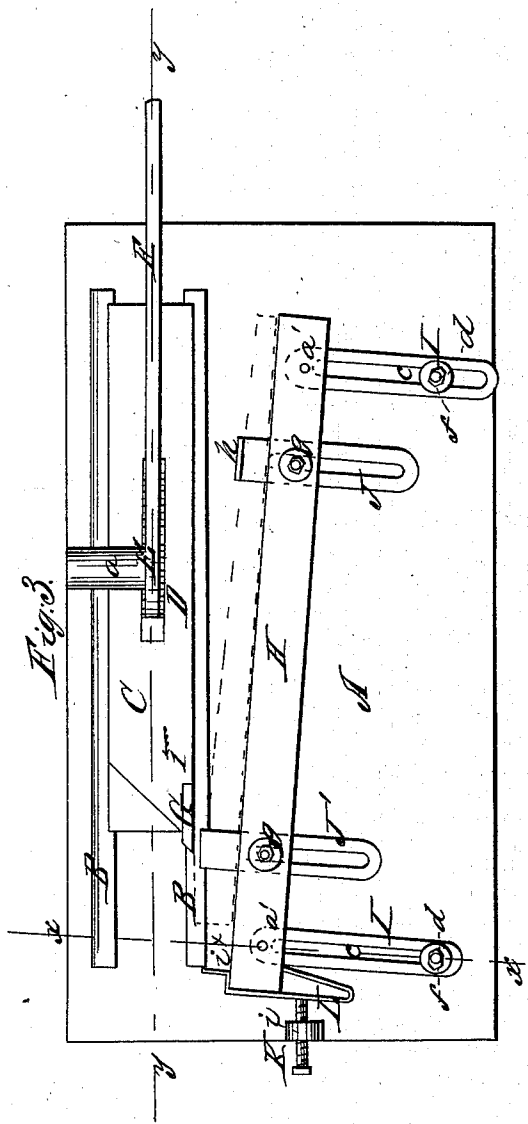
*J. Foster,  
Spoke Machine,*

*No. 49,341,*

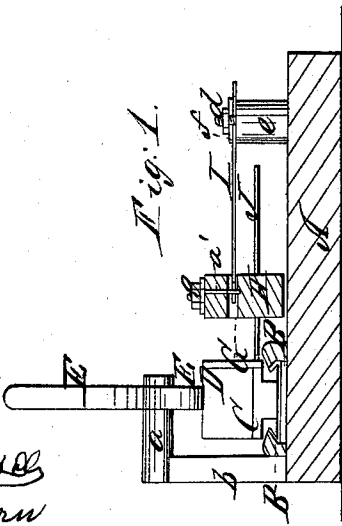
*Patented Aug. 8, 1865.*



*Fig. 2.*



*Fig. 3.*



*Fig. 1.*

*Witnesses:*

*Thos. Fudd  
Wm. Brown*

*Inventor:  
Junius Foster  
per [Signature]  
Attorneys*

# UNITED STATES PATENT OFFICE.

JUNIUS FOSTER, OF LONG BRANCH, NEW JERSEY, ASSIGNOR TO HIMSELF  
AND JOHN SLOCUM, OF SAME PLACE.

## IMPROVEMENT IN SPOKE-MACHINES.

Specification forming part of Letters Patent No. 49,341, dated August 8, 1865.

*To all whom it may concern:*

Be it known that I, JUNIUS FOSTER, of Long Branch, in the county of Monmouth and State of New Jersey, have invented a new and useful Machine for Tapering Spoke-Tenons; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a transverse vertical section of my invention, taken in the line *x x*, Fig. 3; Fig. 2, a longitudinal vertical section of the same, taken in the line *y y*, Fig. 3; Fig. 3, a plan or top view of the same.

Similar letters of reference indicate like parts.

The object of this invention is to obtain a simple, economical, and efficient device for expeditiously tapering the tenons at the inner ends of spokes, whereby the proper "dish" is given the wheel.

The invention consists in the employment or use of a reciprocating cutter working or moving in a right line, in connection with an adjustable gage, to which the spokes are applied when their tenons are tapered, the above parts being used in connection with stops, and all arranged as hereinafter set forth, whereby the desired work may be expeditiously and accurately performed, far more so than can be done by the hitherto exclusive manual process or mode.

A represents a base-plate, on which two parallel guides, B B, are permanently secured, and between which a sliding block, C, is placed and allowed to operate freely. This block may have a reciprocating motion imparted to it by means of a rack, D, on its upper surface, into which a toothed segment, E, gears, the latter being at the lower end of a lever, F, which has its fulcrum-pin *a* attached to an upright, *b*, on the base-plate. The block C has a cutter, G, attached to it at one end and at one side; and H is a gage-bar, which has two metal plates, I I, projecting from it, one near each end, said plates being secured to the gage-bar by pivots *a'*, and having each an oblong slot, *c*, made longitudinally in them for screws *d d* on uprights *e* to pass through, the screws *d* having nuts *f* on them above the plates I I, by which the plates and gage-bar may be secured at any

desired point within the scope of their movement. The gage-bar H has two metal plates, J J', passing through it at right angles, said plates being also slotted longitudinally and having screws passing through them, with nuts *g* on their upper ends, to secure said plates in position, they being allowed an adjusting movement to suit the size of the spokes to be operated upon, the spokes resting on the plates. The plate J has an upright lip or flange, *h*, at its end at the side of the bar H where the spoke (shown in red) is placed, and the other plate, J', serves as a stop as well as a support for the spoke, the shoulder at the under side of the spoke bearing against the plate J'.

K is a set-screw, which passes horizontally through a short upright, *i*, at one end of the base-plate, said screw serving as a bearing for the gage-bar H at one end, said end having a plate, L, attached to it to bear against the same. (See Fig. 3.)

The spokes (one at a time) are laid on the plates J J', the shoulder formed by the tenon, at the under side of the spoke, bearing against the plate J'. The bar H is then adjusted in a more or less oblique position with the path of the movement of the cutter G, corresponding with the taper desired to be given the side or back of the tenon, and the tenon is placed sufficiently near the path of the movement of the cutter to admit of the latter taking a sufficient quantity of wood off from the tenon when shoved in the direction indicated by arrow 1.

In case the tenons are formed on the spokes without shoulders, as is most generally the case when the spokes are made for large wheels, the inner ends may bear against a stop-plate, *i'*, at the end of bar H.

The device is extremely simple and efficient and admits of the tenons being beveled very expeditiously and in a uniform manner.

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

The arrangement of the cutter G, attached to the reciprocating block C, the adjustable gage-bar H, and slotted plates I I' J J', all constructed as and for the purposes herein specified.

JUNIUS FOSTER.

Witnesses:

GEORGE CADE,  
GEO. H. GREEN.