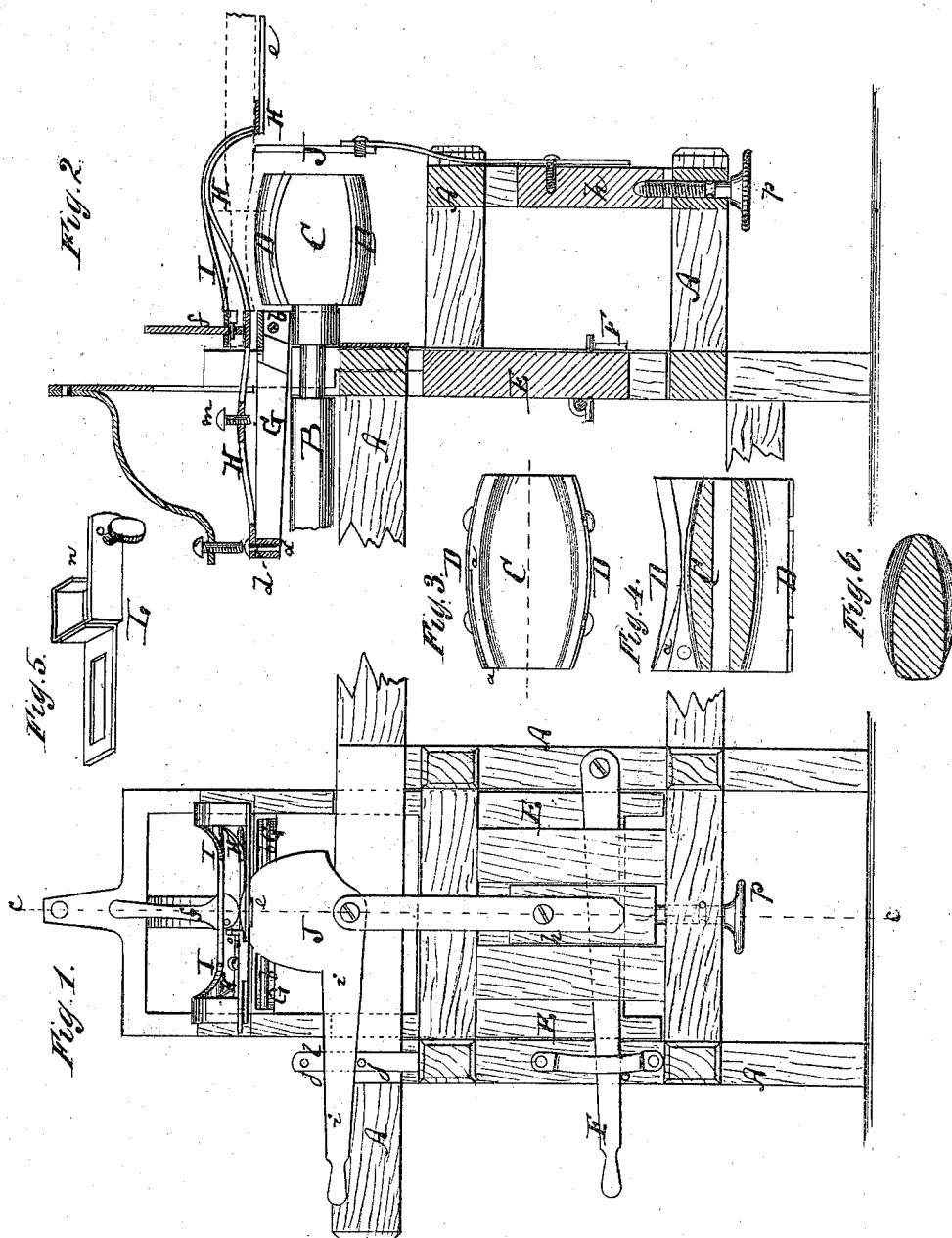


J. B. STANLEY & M. D. SMITH.

Improvement in Machines for Throating Spokes.

No. 128,823.

Patented July 9, 1872.



Witnesses:

E. Woff.
H. A. Graham.

Inventor:

J. B. Stanley.
M. D. Smith.

PER

Attorneys.

UNITED STATES PATENT OFFICE.

JOSEPH B. STANLEY AND MATTHEW D. SMITH, OF TOUGH KENAMON, PA.

IMPROVEMENT IN MACHINES FOR THROATING SPOKES.

Specification forming part of Letters Patent No. 128,823, dated July 9, 1872.

Specification describing a new and Improved Spoke-Facing, Throating, and Tapering Machine, invented by JOSEPH B. STANLEY and MATTHEW D. SMITH, of Tough Kenamon, in the county of Chester and State of Pennsylvania.

Figure 1 represents a front elevation of our improved spoke-machine. Fig. 2 is a vertical section of the same taken on the plane of the line *c c*, Fig. 1. Fig. 3 is a detail side view of our improved cutter-head; Fig. 4, a longitudinal section of the same; and Fig. 5, a perspective view of detachable gauge, which is used in holding the spoke to be tapered. Fig. 6 is a transverse section through the throat of the spoke.

Similar letters of reference indicate corresponding parts.

This invention relates to a new machine for throating the spokes of wagon or carriage wheels, facing the same, and tapering them toward the outer ends. The invention consists in the arrangement of an eccentric support for the spoke while in contact with said cutter, so that the cut may be tapering to make the spoke thinner on the face than at the back. The invention further consists of various other details of improvements, as hereinafter more fully described.

A in the drawing represents the frame of our improved spoke-machine. B is the shaft carrying the cutter-head C. The cutters D D on the latter have concave cutting-edges, and are curved to fit the convex sides of the head C. By being thus shaped they are made to cut at the ends first, and last in the middle. Thereby they are prevented from tearing the wood or from being injured by coming in contact with the hard wood. If one end of a cutter commences to tear the wood the other end will immediately counteract the effect by cutting away the chip so produced. When the machine is to be used for tapering a tenon a small additional cutter, *a*, is applied under one of the main cutters, as shown. On a vertical slide, E, which is arranged on the frame A back of the cutter-head, and which can be set up or down by means of a lever, F, is pivoted, by horizontal pivots *b b*, a backwardly-projecting frame, G. The spoke-carrying frame H is, by a vertical pin, *d*, pivoted to the

back of the frame G. The frame H extends over the cutter-head, and has a handle, *e*, at the front end, whereby it can be swung to one side or the other. A clamp, I, regulated by a cam or lever, *f*, is applied to the top of the frame H to hold the spoke in place, which rests against laterally-adjustable gauges *g*. J is an eccentric, secured to a sliding standard, *h*, in front of the cutter-head, and provided with a projecting handle, *i*, whereby it can be swung more or less to the side, and held in suitable position by pins *jj* in an upright guide, *l*. By means of a screw, *p*, bearing against the lower side of the slide *h*, the height of the eccentric can be regulated. The eccentric J constitutes the guide above the cutters for the spoke that rests on the frame H, and, by its means, the peculiar rounded bevel and throat of the spokes is produced which leaves the spoke thin at the face and thick at the back, as is clearly indicated in Fig. 6. The degree of throat is controlled by means of the screw *p*. This is a very important novelty in spoke-machines, and permits the convenient production of suitable patterns. While the spoke is on the lower part of the eccentric it is hollowed more by the cutters than when held higher by the same support. When the machine is to be used for tapering the spoke at the outer end the gauge L, shown in Fig. 5, is attached to the shank of the frame H by means of a screw or pin, *m*, and serves then to receive the spoke-tenon between its ear *n* and screw *o*.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The spoke-holder H pivoted to the frame G, which is applied to the vertical slide F, substantially as herein shown and described.
2. The eccentric spoke-support J, arranged in front of the cutter-head under the spoke-carrier, substantially as specified.
3. The gauge L, arranged in combination with the spoke-holder H, substantially as herein shown and described.

JOSEPH B. STANLEY.
MATTHEW D. SMITH.

Witnesses:

THOMAS H. CHANDLER,
ENOCH PASSMORE.