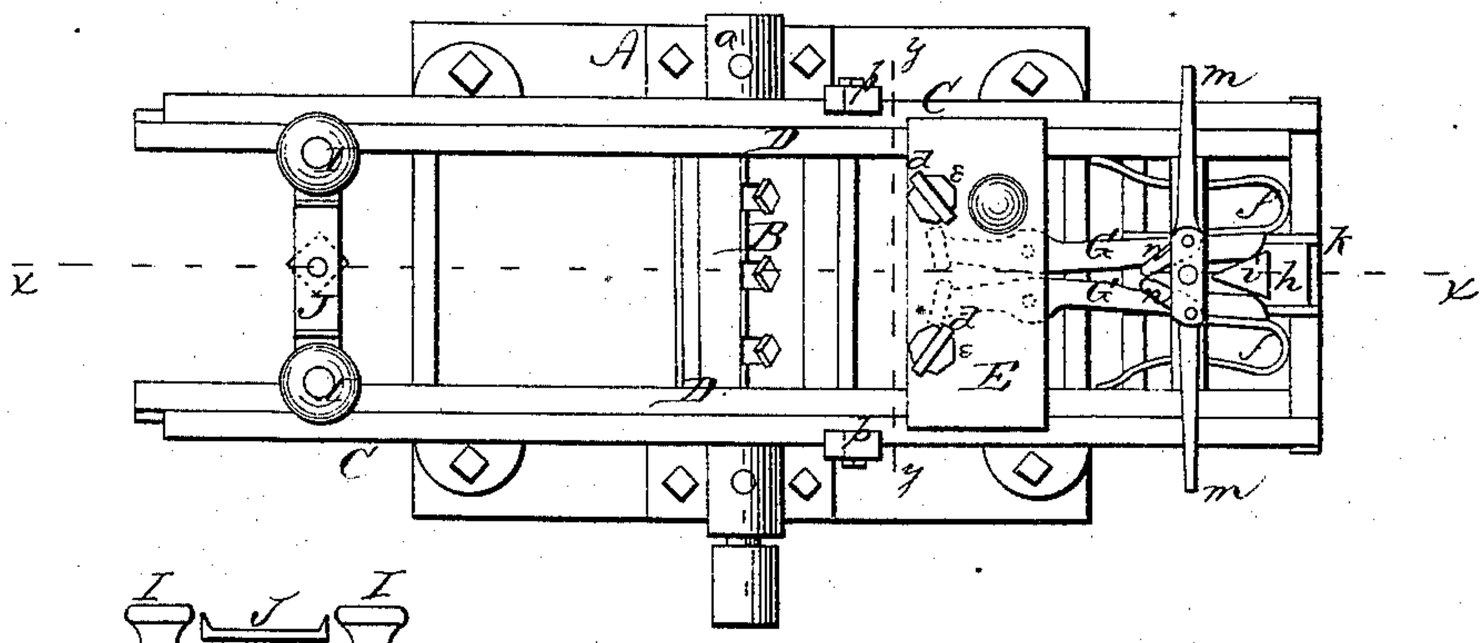
W. M. SHARPSTEEN.

Machine for Tapering the Tenons of Spokes.

No. 160,722 Patented March 9, 1875.

Fig. 1.



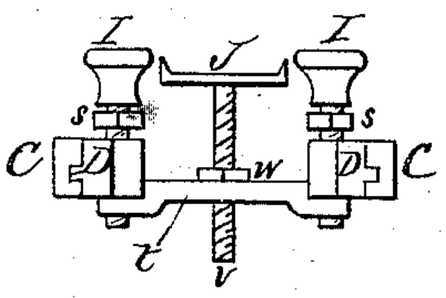


Fig. 2.

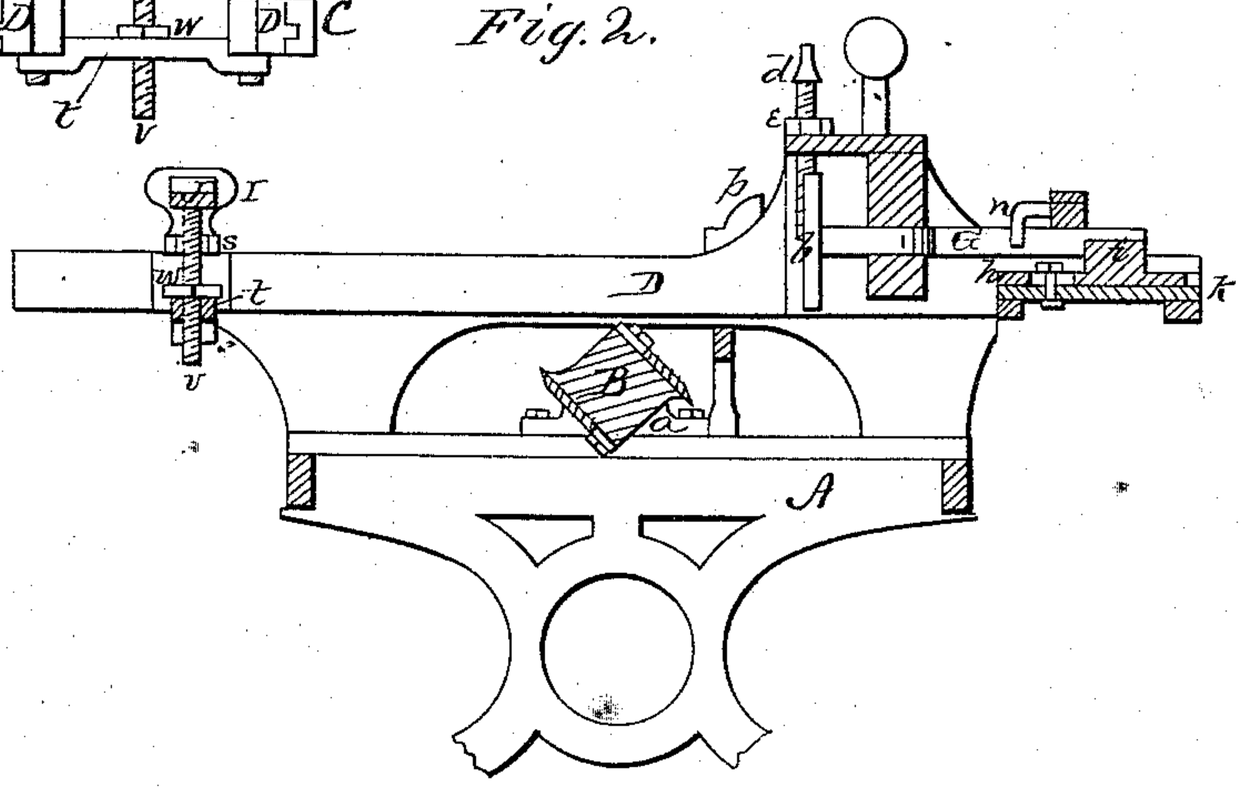
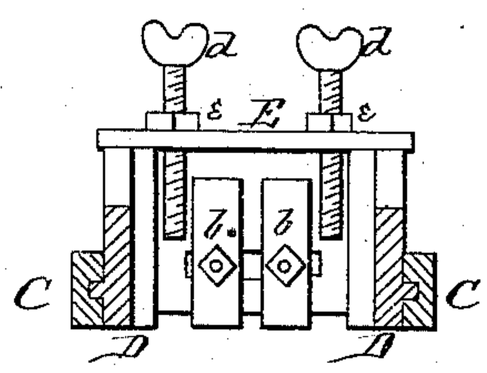


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM M. SHARPSTEEN, OF MECHANICSBURG, PENNSYLVANIA.

IMPROVEMENT IN MACHINES FOR TAPERING THE TENONS OF SPOKES.

Specification forming part of Letters Patent No. **160,722**, dated March 9, 1875; application filed January 28, 1875.

To all whom it may concern:

Be it known that I, WILLIAM M. SHARPSTEEN, of Mechanicsburg, in the county of Cumberland, and in the State of Pennsylvania, have invented certain new and useful Improvements in Machines for Tapering the Tenons of Spokes; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a machine for facing and tapering spokes, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a plan view of my machine. Fig. 2 is a longitudinal vertical section of the same through the line *x x*, Fig. 1; and Fig. 3 is a transverse vertical section through the line *y y*, Fig. 1.

A represents a stand of any suitable construction, on the top of which are boxes *a a*, to receive the journals of the cutter-head B. On top of the stand A are arranged two horizontal parallel guides, C C, elevated above the cutter-head a suitable distance, and in said guides is placed a frame or carriage, D, to be moved back and forth. Across the frame D, near one end, is formed a head-block or box, E, in which are pivoted two levers, G G, each of which has a vertical jaw, *b*, attached to its inner end. Through the top of the head-block E are passed two set-screws, *d d*, which extend down between the jaws *b b* and the ends of the head-block. On each set-screw, above the head-block, is placed a jam-nut, *e*.

The outer ends of the levers G G are operated upon by springs *f f*, to throw the jaws *b b* outward from each other.

On cross-bars attached to the guides C C, at or near one end, is secured a flanged plate, *k*, in which is adjusted a slotted plate, *h*, having upon its upper surface a V or wedge shaped projection, *i*. Above the outer ends of the levers G G is a cross-bar attached to the frame D, upon which cross-bar are pivoted two levers, *m m*, each lever having at its inner end a projecting arm, *n*, extending downward between the levers. The outer ends of the levers *m* project beyond the sides of the frame or carriage D, so as to strike stops or projections *p* on the guides C.

At the other end of the frame or carriage D is a cross-bar, *t*, held and adjusted by means of thumb-screws I I, having jam-nuts *s* upon them, and through the center of the cross-bar *t* passes a screw, *v*, with jam-nut *w*, said screw supporting at its upper end a rest, J, as shown.

The operation of the machine is as follows: The carriage of frame D is moved backward until the wedge *i* enters between the outer ends of the levers G G, pressing or forcing the same apart, bringing the jaws *b b* closer together. The rest J is then adjusted up or down, and also at any angle desired, by means of the thumb-screws I. The spoke is laid on the rest J, and its tenon inserted between one of the jaws *b* and the end of the head-block, up against the end of the set-screw *d*, which also has been previously adjusted as desired. The frame or carriage is then moved forward by hand or other power, and, as soon as the outer ends of the levers G clear the wedge *i*, the springs *f* act upon said levers to force the jaws *b* outward, the spoke being thus held between one of the jaws and the end of the head-block, and, as the carriage advances the spoke is faced and tapered by the cutter-head. When the ends of the levers *m* strike the projections *p* the spoke is released by the arms *n* forcing the outer ends of the levers G apart.

In this machine, it will be seen, the spoke is tapered lengthwise, which prevents any loss, which always occurs, more or less, when tapering across the grain.

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

1. The combination of the head-block E, levers G G, jaws *b b*, springs *f f*, and set-screws *d d*, substantially as and for the purposes herein set forth.

2. The adjustable plate *h*, with wedge-shaped

projection *i*, in combination with the levers G G, as and for the purposes herein set forth.

3. The levers *m m*, with arms *n n*, in combination with the levers G G and projections *p p*, as and for the purposes herein set forth.

4. The combination of the adjustable cross-bar *t*, thumb-screws I I, rest J, and screw *v*, as and for the purposes herein set forth.

5. The combination, with the revolving cutter-head B, of the reciprocating frame or carriage D, having the devices herein described for adjusting and holding the spoke to be faced and tapered, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 29th day of December, 1874.

W. M. SHARPSTEEN.

Witnesses:

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WM. BRAMHALL.