

E. C. STEARNS.
Spoke-Pointer.

No. 220,442.

Patented Oct. 7, 1879.

FIG. 1.

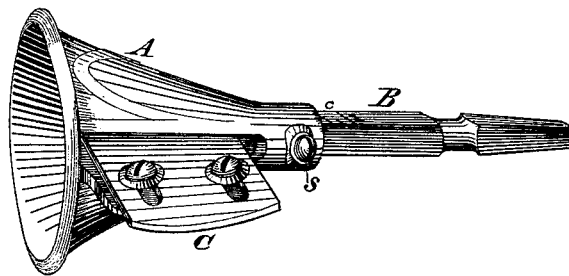
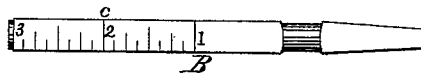


FIG. 2.



WITNESSES.

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IMPROVEMENT IN SPOKE-POINTERS.

Specification forming part of Letters Patent No. **220,442**, dated October 7, 1879; application filed January 13, 1879.

To all whom it may concern:

Be it known that I, EDWARD C. STEARNS, of Syracuse, Onondaga county, State of New York, have invented a certain new and useful Improvement in Spoke-Pointers; and I declare the following to be such a full, clear, and complete description of the same as to enable any person skilled in the art to which the invention appertains to make and use the same.

This device belongs to the class of tools termed "adjustable," and is designed for trimming down or pointing the outer ends of wagon or other spokes preparatory to forming tenons by means of a hollow auger. The devices heretofore used for this purpose consisted merely of a funnel-shaped or tapering frame provided with a cutter and a fixed or stationary shank to connect the tool with a bit-stock. Experience has developed numerous objections to this form of pointer, among which may be mentioned the unnecessary waste of labor in trimming down to the desired size, and also the tendency to run over out of line with the vertical axis of the spoke occasioned by the taper of the trimmer. This tendency also increased the difficulty to form a straight tenon with the hollow auger.

To overcome these difficulties and objections I found it necessary to provide an adjustable device operating centrally with the vertical axis of the tool, and consisting of a cone-shaped frame, its interior face tapering uniformly from three-eighths of an inch at or near the apex to a diameter of two inches at the base, and movable spindle or shank, provided upon one of its sides with a scale to indicate the desired length to be cut.

For a more specific description of my device reference is had to the accompanying drawings, forming a part of this specification, in which like letters indicate corresponding parts.

Figure 1 is a side view of my newly-invented spoke-pointer, showing the frame and movable spindle or shank. Fig. 2 shows the shank detached.

The letter A represents the frame or body, made of metal, preferably of iron or brass, cone-shaped in form, and the interior face gradually tapering from three-eighths of an inch

at the top to two inches in diameter at the bottom. A cutter, C, secured to a projection on the frame by means of a cap and screws, or washers and screws, projects into a mortise in the frame, extending from the base-rim to the apex, its cutting-edge being presented to the timber of the spoke as it enters the mouth of the frame. A spindle or shank, B, operating in a square mortise in the upper or small end of the frame, serves to connect the tool to a bit-brace. Upon one of the flat sides of the shank I place a scale, *c*, marked off in inches and fractions thereof, and indicating three-eighths of an inch to two inches, to correspond to the interior diameters of the tapering frame. The shank is movable, setting in or out, as desired, being retained at any desired point on the scale by a screw, *s*.

It will be observed that the tapering or funnel-shaped frame points or trims off the timber on the end of the spoke on the same principle of the well-known pencil-sharpener, the object being to prepare the spoke for tenoning with a hollow auger. The use of the scale on the shank will now be apparent, because when the shank is set into the inch-mark, for example, on the scale, owing to the gradual taper of the frame, the spoke will be pointed for the reception of a hollow auger cutting a tenon measuring one inch in diameter, and any size within the scope of the tool indicated by the scale on the sliding shank can be immediately obtained without measuring or guess-work, effecting not only a great saving of labor, but securing accuracy, which is a great desideratum in this class of work. To obtain a smooth or rank cut, I slot the cutter where the securing-screws pass through, and, by means of the screws and slots, adjust it to the desired cut, thus rendering the tool positive and certain in its action. The shank B also forms a central guide, steadying the tool in practical use, and although preferable when made square, it may be round, in which case it is necessary to conform the mortise in the frame accordingly.

I am aware that sliding shanks similar to mine have been used heretofore in hollow augers for determining the length of tenon and to connect the tool to the bit-stock; also, that the combination of a movable shank with a cutter and frame for cutting tenons is not

novel, such combination being already patented. The novelty of my device, however, consists in employing the movable shank in a spoke-pointer for indicating the desired interior diameter of the tapering frame corresponding to the desired tenon, and determining the cut at that point, which result I obtain by the construction set forth above.

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

1. The tapering frame A, in combination with the movable shank B, having a scale, *c*, thereon, graduated so that its extreme measurements coincide with the least and greatest interior diameters of the frame A, substantially as herein specified, and for the purpose set forth.

2. In a spoke-pointer, the adjustable cutter C, tapering frame A, in combination with each other and the movable shank B, having a scale, *c*, graduated to indicate interior diameters of the frame A, and retained at any desired point on the scale by a screw, *s*, substantially as described, and for the purposes specified.

In testimony that I claim the foregoing I have hereto set my hand this 26th day of November, A. D. 1878.

EDWARD C. STEARNS.

Witnesses:

C. H. SEAGER,

J. NEAL PERKINS.