

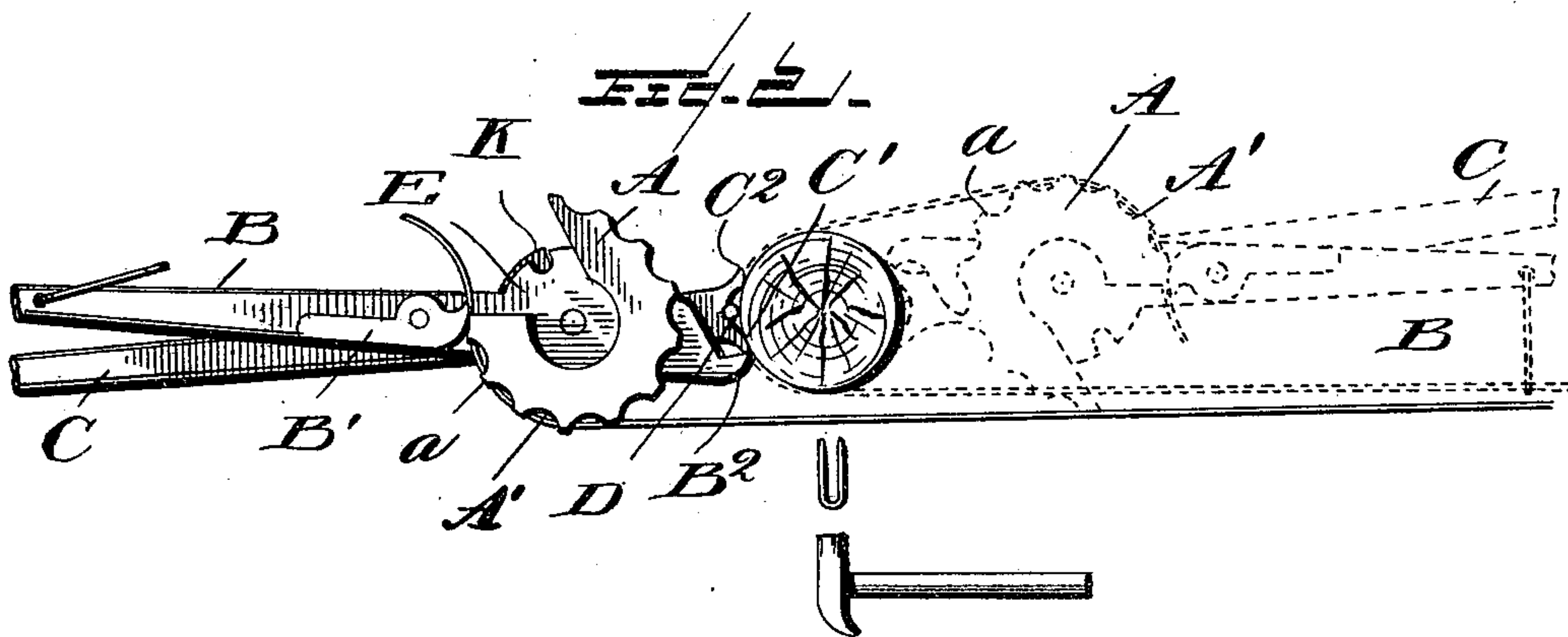
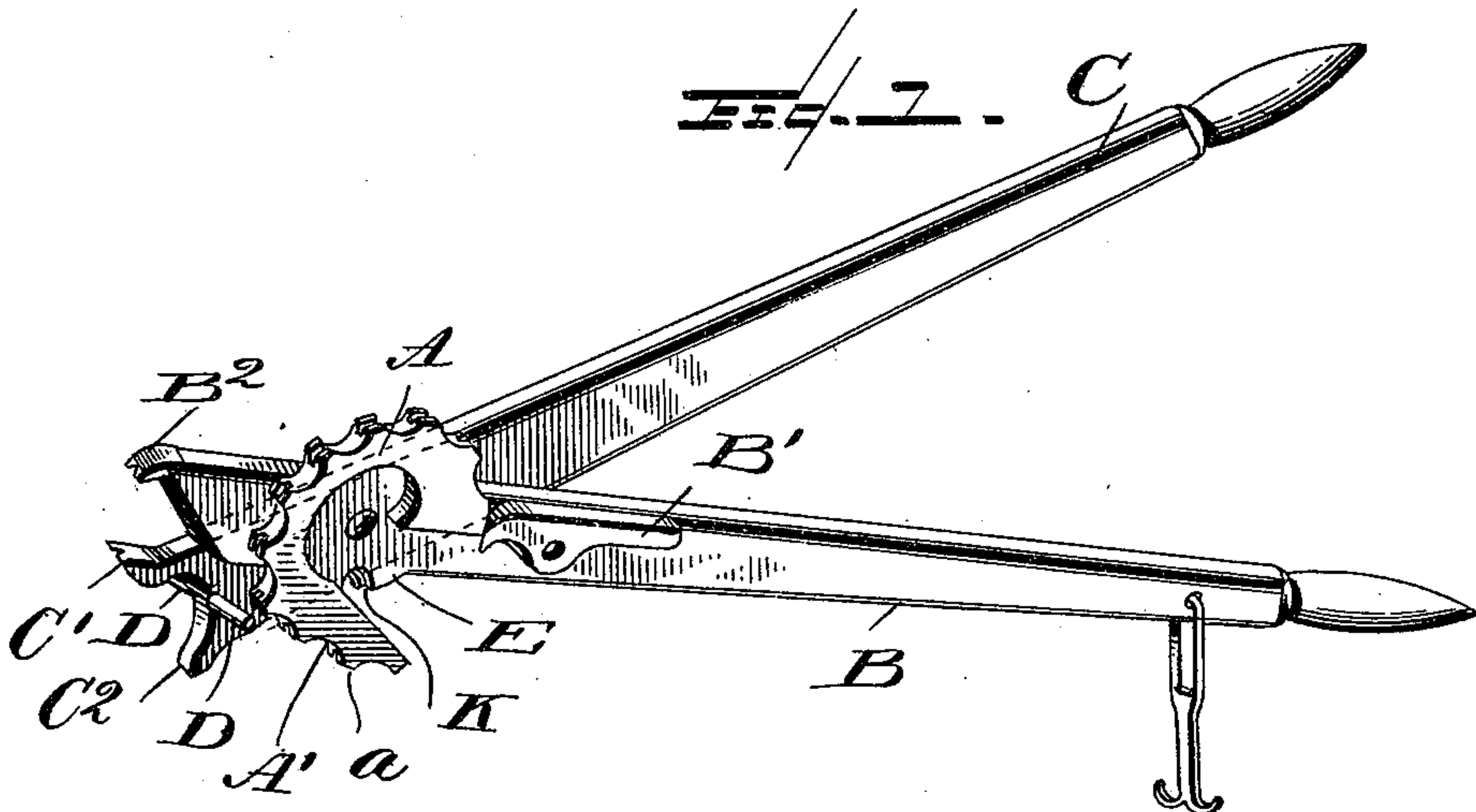
No. 644,477.

Patented Feb. 27, 1900.

E. E. SWARM.
COMBINATION TOOL FOR WIREWORKING.

(Application filed June 23, 1899.)

(No Model.)



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COMBINATION-TOOL FOR WIREWORKING.

SPECIFICATION forming part of Letters Patent No. 644,477, dated February 27, 1900.

Application filed June 23, 1899. Serial No. 721,622. (No model.)

To all whom it may concern:

Be it known that I, EMERY E. SWARM, a citizen of the United States, residing at Calamus, in the county of Clinton and State of Iowa, have invented certain new and useful Improvements in Combination-Tools for Wireworking; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in combination-tools, and especially a wire-stretcher, staple-puller, and wire-cutter; and it consists in the provision of a tool of this character by the use of which a wire may be stretched from the first to the last post and hold the wire in a taut relation while it is being fastened by means of a staple.

More specifically the present invention resides in the provision of a combination-tool having a wire-engaging segment scalloped about its curved margin and grooved to receive the wire, a clamping-jaw being pivoted to the lever on which said segment is mounted and provided to hold one end of the wire to be stretched, while the end of the tool is designed to be held against the post, about which the tool is swung, the wire which is being stretched by which movement engaging in the grooves in the circumference of the segment, means being provided to hold the wire taut while staples are driven to hold the purchase.

To these ends and to such others as the invention may pertain the same consists in the novel construction, combination, and adaptation of the parts, as will be hereinafter more fully described and then specifically defined in the appended claims.

My invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this application, and in which—

Figure 1 is a perspective view of the tool; and Fig. 2 is a perspective view showing the manner of attaching the tool to the wire to be stretched, said view showing the tool in dot-

ted lines in the position which it assumes when holding the wire stretched to be fastened by staples.

Reference now being had to the details of the drawings by letter, A designates the segment about which the wire is stretched and has a scalloped circumference, as shown at A', the apexes *a* of said scallops being grooved to receive the wire. Said segment is securely fastened to or may be integral with the lever B, and pivoted to said lever B adjacent to one end of said segment is a clamping-lever B', between which and the end of the segment the wire to be stretched is adapted to be held. Pivoted to the lever B is a second lever C, which has at one end a jaw C', slightly offset, which bites against a similar-shaped jaw B² on the lever B, thus producing a pair of nippers for use in fence-making or for any other purposes for which they may be adapted. At one end of the lever C is a projection C², which is preferably of the size and shape of the jaw C' on said lever and is slightly outwardly bent, thus leaving a scalloped portion between said jaw and projection. Laterally extending from the end of the lever C and between said jaw and projection are the lugs D D, which serve the purpose of holding the wire-stretching tool at right angles with the post, about which the end of the stretcher turns while the tool is in operation. Said projection on the lever C when not in use in the stretching is utilized as a staple-puller. Portions of said levers B and C adjacent to their pivotal points are widened, as shown at E, and the outer curved margin of each of said widened portions have cut-away or notched portions K K, which when the levers of the tool are open part way are in registration, but when closed from such position or opened wider said notches are out of registration, these notches being provided as wire-cutting shears. Near the free end of one of said levers, as B, is a hook which is provided, as shown in the drawings, to hold the lever with its grip upon the wire in a position so that the wire may be fastened to the post in any suitable manner, as by means of staples.

In operation the wire to be stretched is inserted between one end of the segment and the clamping-lever. Then the end of the instrument or the scalloped portion between the

jaw on the lever C and the projection is held against the post, and then in order to stretch the wire the handles are swung around, with the end of the tool fulcrumed against the post, 5 said handles being brought around in such position as to allow the hook carried at the free end of the lever B to engage with the taut wire, in which position the stretcher may be held until the wire is fastened to the post.

10 When the device is used as a staple-puller, the lower jaw of the pincers may be used as a fulcrum, while the said projection may engage with the staple in a manner clearly understood.

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

20 1. A combination-tool consisting of a segment made on the arc of a circle, having a scalloped circumference with the apexes between the scallops being grooved to receive the wire, a handle supporting said segment,

a clamping-lever pivoted thereto, designed to hold one end of the wire between said lever and segment and a second lever pivoted to 25 said segment-carrying lever and provided with a scalloped end designed to engage against the post about which the wire-stretcher is adapted to be swung, as set forth.

2. A wire-stretching tool, consisting of two 30 levers pivoted together, one of which is scalloped at its end, a segment with grooved circumference carried by one of said levers, a clamping-lever which coöperates with one end of said segment to hold the wire and a hook 35 secured near the free end of said segment-carrying lever, as shown and described, and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

EMERY. E. SWARM.

Witnesses:

GEO. S. JACKSON,

Z. H. SWARM.