(No Model.)

H. A. & Z. S. LAWRENCE.

SAP SPOUT.

No. 262,060. Patented Aug. 1, 1882.

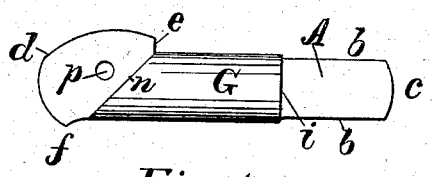

Fig. 1

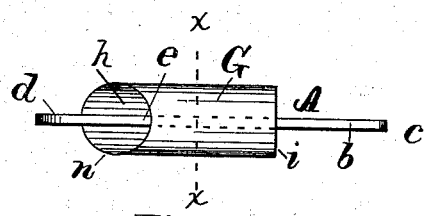

Fig. 2.

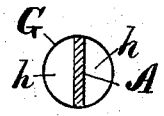

Fig. 3.

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UNITED STATES PATENT OFFICE.

HIRAM A. LAWRENCE AND ZEPHANIAH S. LAWRENCE, OF WEST SHEFFORD, QUEBEC, CANADA; SAID ZEPHANIAH S. LAWRENCE ASSIGNOR TO SAID HIRAM A. LAWRENCE.

SAP-SPOUT.

SPECIFICATION forming part of Letters Patent No. 262,060, dated August 1, 1882.

Application filed October 29, 1881. (No model.) Patented in Canada November 2, 1880, No. 11,924.

To all whom it may concern:

Be it known that we, HIRAM A. LAWRENCE and ZEPHANIAH S. LAWRENCE, citizens of the Dominion of Canada, residing at West Shefford, in the Province of Quebec, Canada, have invented certain new and useful Improvements in Sap-Spouts; and we do hereby 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 letters or figures of reference marked thereon, which form a part of this specification.

Our invention relates to a sap-spout to be driven into a tree, and having certain construction to facilitate the flow of the sap, and adapted to support a bucket or other vessel for receiving the sap, all as hereinafter described.

In the drawings hereto annexed, Figure 1 is a side view of the spout. Fig. 2 is a top view, and Fig. 3 is a cross-section through *x x*.

The letter A designates the stem of the device. It consists preferably of a wrought-iron flat plate, which is cut from the sheet in the form shown in the drawings by a suitable die, and is then tinned or galvanized. The end of the thin flat stem which enters the orifice bored into the tree projects from the tube hereinafter described. The breadth across the flat part of the stem equals the inner diameter of the tube. When in the tree the flat side of the stem occupies a vertical position, and only its upper and lower edges have bearing within the aperture. Thereby the stem makes no side pressure, and the usual checking or splitting and the loosening of the bark of the tree which follows the use of metal sap-spouts are obviated. The extremity *c* of the stem may be of any desired shape. In the present instance it is slightly rounded. The head or driving end *d* is broader than any other part, and at its upper edge, a short distance from the front extremity, it is cut to form a notch, *e*, which serves to catch and support the bail of a bucket. Its lower edge, very near the front extremity, extends downward a little and forms a point, *f*, from which the sap drips into the bucket. As this drip-point or "drop-director" extends beyond the plane of the outer side of the wall of the tube hereinafter described, it insures that the sap will have a low point from which to drip, and should the spout be inserted in a nearly level position, or perhaps the outer end be a little the higher, this drip-point will prevent the sap from running back along the under side of the spout. A cylindrical tube, G, surrounds the central portion of the stem, and is secured to the edges thereof by solder, and this arrangement forms two passages or channels, *h*, for the sap, one being on each side of the flat stem. The end of the tube next to the pointed end of the stem is squared or cut off straight across, as at *i*, and thereby is adapted to come square against the bark of the tree, the projecting end *c* of the stem only entering the orifice of the tree, and the said flat stem alone, by reason of its upper and lower edges having a bearing in the aperture or hole bored in the tree, serves to sustain the weight of the bucket without causing any strain on the tube. The end *i* of the tube surrounds the mouth of the orifice, making a water-tight joint by cutting its way slightly into the surface of the bark in the direction in which it is driven. The end of the tube next to the head or outer end of the stem is cut diagonal or slanting, as at *n*. The long part of the slanting end, being on the lower edge of the stem, serves to deliver the sap near to the drip-point. As the tube surrounds only the central part of the flat stem, leaving the head of the stem exposed at one end of the tube and the point of the stem exposed at the other end, the point may be driven into the tree by hammering on the head, and thereby occasion no injury to the tube nor loosen the tube from the stem. In the present instance the tube is made of a blank of sheet metal, which is rolled to form the cylinder. The two edges of the blank, when brought together, make a straight seam, which extends along one of the edges, *b*, of the stem. A hole, *p*, is punched through the head of the stem, and serves to receive a hook or the point of a tool, by which the spout is withdrawn from the tree.

An advantage of my device consists in the fact that the flat end of the stem is readily entered into the wood of the tree, because the

thin flat part, being in the perpendicular position, passes between the fibers of the wood without cutting them. As only two thin edges of the stem have bearing in the bore or orifice, the cut pores of the wood are not much obstructed thereby, and the sap will issue therefrom freely. From the fact of the spout being cylindrical, water running down the tree is not caught or conducted to the bucket, and no hold is given the frost to lift the spout from its position. The notch to support the bucket enables the spikes and the troublesome bent wire so largely used to be dispensed with.

The device is easily adjusted without rossing the bark, and is also handily removed. It is small, durable, and cheaply made.

Having described our invention, we claim and desire to secure by Letters Patent of the United States—

1. A sap-spout consisting of a tube, a flat stem extending through the tube lengthwise, and having the head of the stem exposed or projecting from one end of the tube and its point exposed or projecting from the other end, as and for the purpose set forth.

2. A sap-spout consisting of a tube, a flat stem extending through the tube lengthwise, and having its point exposed or projecting from one end thereof, and a drop-director at the other end of the tube, which extends beyond the plane of the outer side of the tube, as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

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Witnesses:
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