

(No Model.)

H. BLAKE.
SAP SPOUT.

No. 436,557.

Patented Sept. 16, 1890.

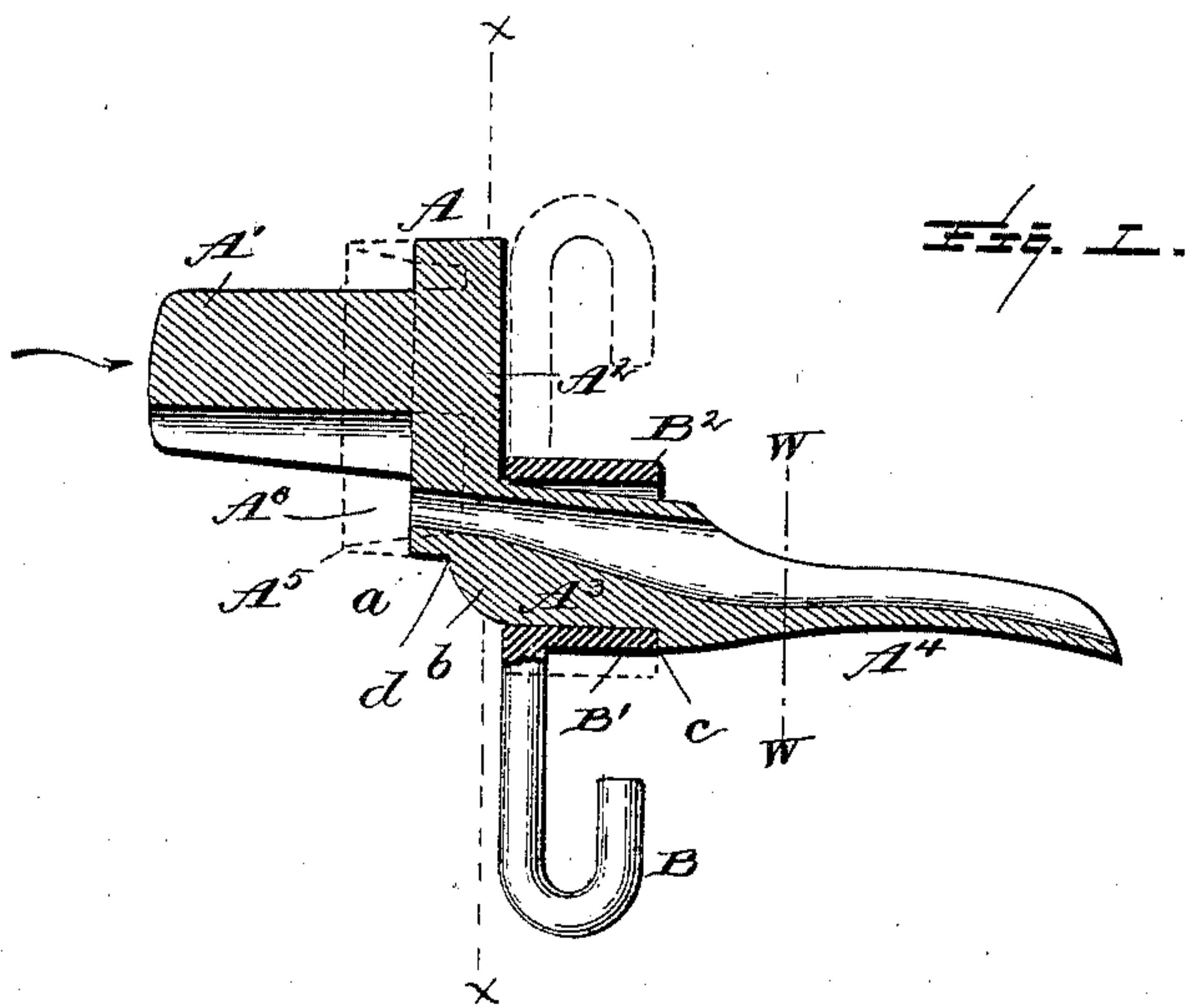


Fig. 2.

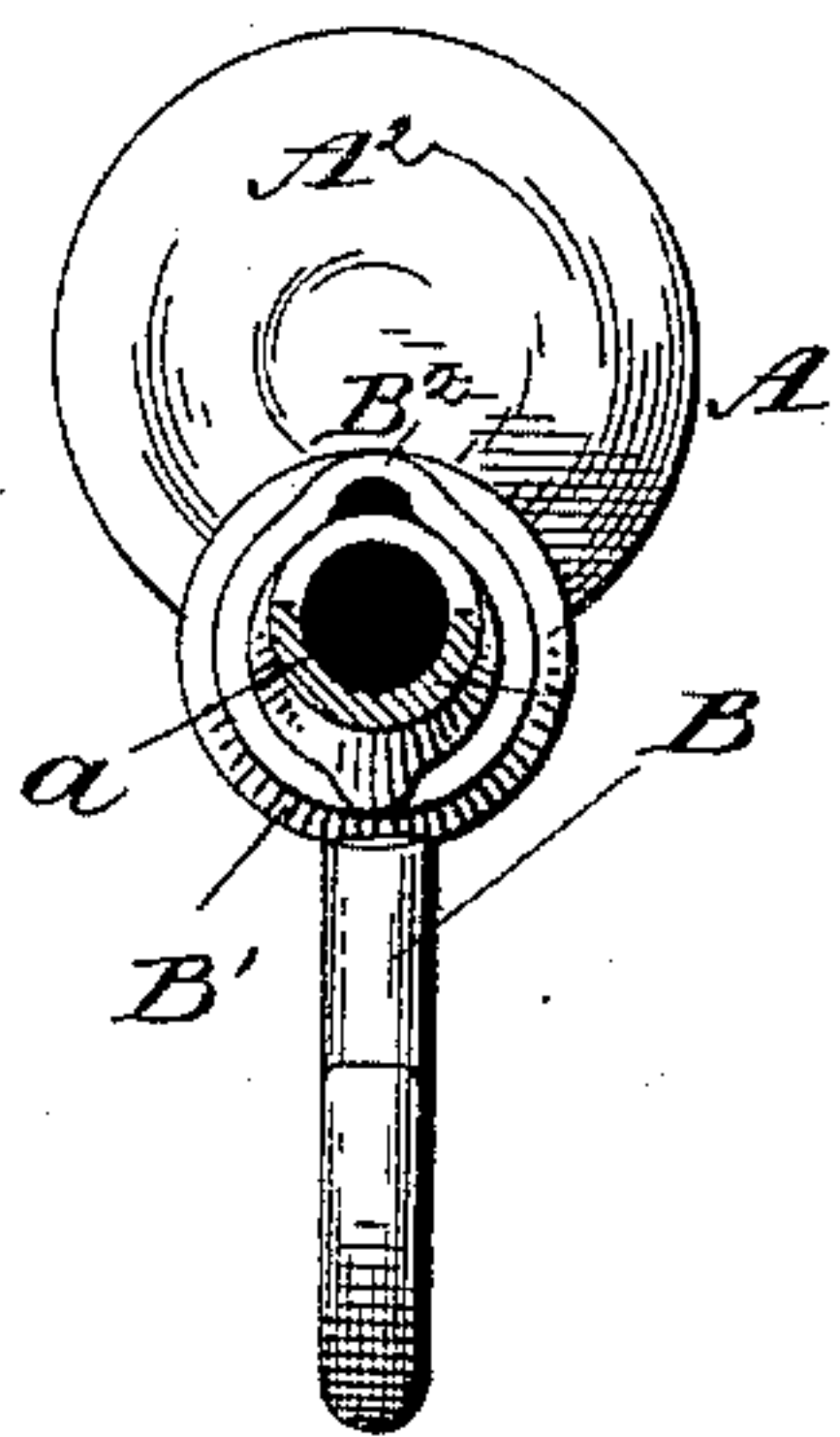


Fig. 3.

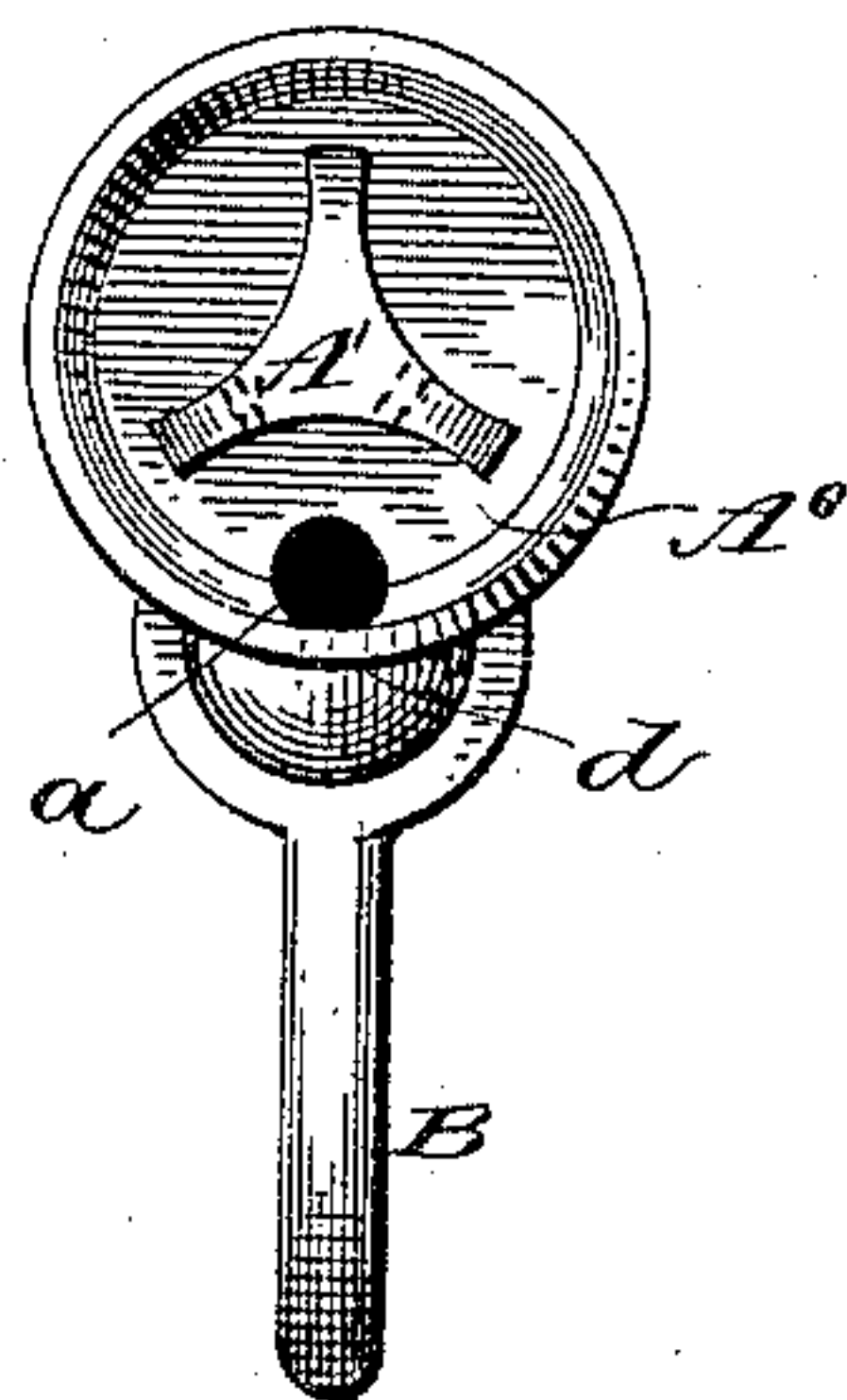
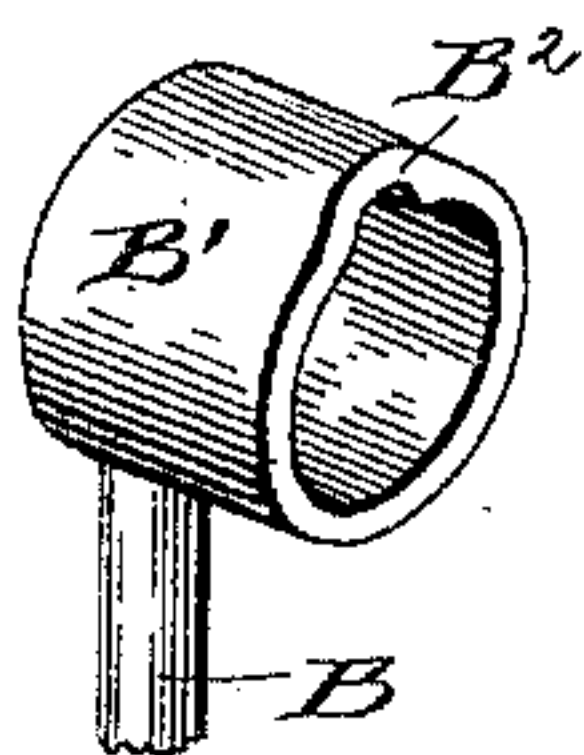


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

HARRY BLAKE, OF PERRYSBURG, NEW YORK.

SAP-SPOUT.

SPECIFICATION forming part of Letters Patent No. 436,557, dated September 16, 1890.

Application filed January 13, 1890. Serial No. 336,727. (No model.)

To all whom it may concern:

Be it known that I, HARRY BLAKE, a citizen of the United States, residing at Perrysburg, in the county of Cattaraugus, State of New York, have invented certain new and useful Improvements in Sap-Spouts, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in sap-spouts; and it has for its object, among others, to provide an improved device of this character which shall be strong and simple, and in which the suspension-hook when once in place upon the spout cannot be displaced without a reversal thereof.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically pointed out in the appended claims.

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

Figure 1 is a central vertical longitudinal section through my improved sap-spout. Fig. 2 is a cross-section on the line $x x$ of Fig. 1. Fig. 3 is an end view looking in the direction of the arrow in Fig. 1. Fig. 4 is a perspective view of the sleeve part of the suspending-hook.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates the body portion of the spout, comprising in a single element the driving-plug A', preferably flanged or formed into the shape shown in Fig. 3 to aid in the entrance of the same into the tree, the driving-head A², the apertured neck A³, and the spout A⁴.

Surrounding the driving-plug may be an annular cutting-ring A⁵, formed integral with the driving-head A², (shown by dotted lines in Fig. 1,) having a sharpened entering-edge and forming an annular sap-chamber A⁶, from the lower portion of which there is an opening a , which communicates through the neck with the spout, as shown clearly in Fig. 1. It will be observed that this neck portion joins the driving-head at the extreme lower portion thereof, so as not to interfere with the

ready driving of the device into the tree. The passage-way through this neck is enlarged from the sap-chamber outward, as shown in Fig. 1, so as to prevent choking of the mouth of the same and affording ready outlet for all the sap. The under side of this neck portion is enlarged, as shown at b , to strengthen the same, and this enlarged portion is formed with a shoulder c upon its under side, for a purpose which will soon appear. This enlargement serves to strengthen the device at the junction of the spout or neck and the main body of the device, and also provides for the forming of the shoulder without weakening the parts, and also provides for the formation of the enlarged opening through the neck. The neck is slightly tapered from its junction with the body outward.

B is the suspending-hook provided with a sleeve B', the bore of which is slightly tapered to conform to the taper of the neck of the spout. This sleeve B' is enlarged diametrically, as shown at B².

In practice the hook is removed from the neck of the spout and the body portion driven into the tree by means of a hammer or other suitable instrument brought into contact with the driving-head. The device is driven into the tree till the sharpened edge of the annular cutting-ring cuts through the bark and beds itself into the solid wood, thus cutting off the bark-sap or any other substance which might come from the new grain of timber being formed between the bark and the solid wood. I thus get rid of the bark-sap, which is bitter, and the so-called "sugar-sand," which comes from between the bark and the solid wood. The solid neck passing through the bark into the solid wood permits the spout to take nothing but the sap from the solid wood. After the body portion has been driven into the tree the sleeve of the hook is placed over the spout and over the neck with the hook upward, as indicated by dotted lines in Fig. 1, the diametrical enlargement of the sleeve being at the under side. The sleeve, after being pushed up against the driving-head, is rotated on the neck until it is brought into the position in which it is shown by full lines in Figs. 1 and 2, the enlargement of the sleeve coming on top of the

neck, as shown in Fig. 2. This prevents displacement of the sleeve until the hook is reversed or thrown upward into the position in which it is shown by dotted lines in Fig. 1, so
 5 that the enlargement of the sleeve will come coincident with the shoulder on the under side of the neck, permitting the withdrawal of the sleeve.

The annular sap-chamber may sometimes
 10 be omitted without affecting the other features of the device, and this latter construction is indicated by full lines in Fig. 1.

The shoulder *d*, formed by the enlargement of the neck, provides a hold for a claw or
 15 other device by which the spout may be withdrawn from the tree.

The passage through the neck and the outer face of the annular sap-chamber incline in opposite directions, as shown clearly in
 20 Fig. 1, which is considered important, inasmuch as it provides for the draining of the sap, preventing it from freezing in cold weather, and avoiding souring of the same in warm weather.

25 What I claim as new is—

1. A sap-spout comprising a body portion

and integral neck, a driving-head, and a spout having passage through the driving-head and neck, with an enlargement at the junction of the neck and body, the body being formed
 30 with a shoulder, and a supporting-hook carrying a sleeve rotatable on the body portion and formed with a diametrical enlargement, substantially as specified.

2. A sap-spout comprising a body portion
 35 having formed integral therewith an annular cutting-ring, a neck, a driving-head, and a spout having communication with the space inclosed by the cutting-ring through the neck, and an enlargement at the junction of the
 40 neck and body, the passages through the neck and sap-chamber inclining in opposite directions, combined with a hook carrying a sleeve rotatable on the body portion and formed with a diametrical enlargement, sub-
 45 stantially as and for the purpose specified.

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

HARRY BLAKE.

Witnesses:

B. H. GRAW,
 T. W. SEARLS.