

(No Model.)

M. R. MOSS.
SAP SPOUT EXTRACTOR.

No. 513,591.

Patented Jan. 30, 1894.

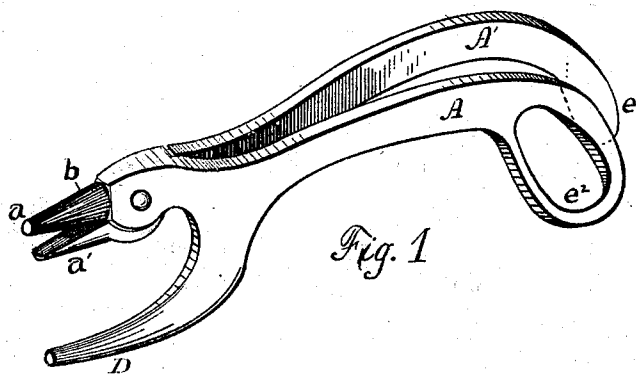


Fig. 1

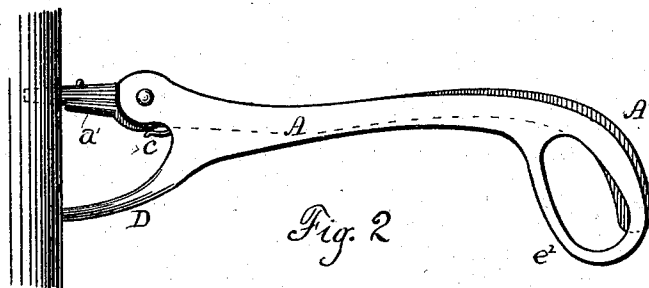


Fig. 2

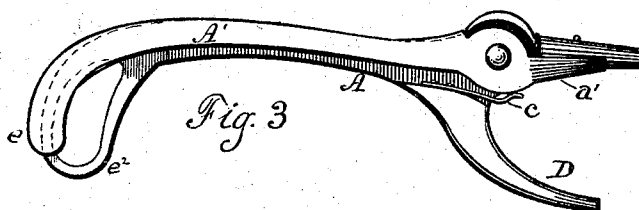


Fig. 3



Fig. 4

WITNESSES

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MARVIN R. MOSS, OF HUNTSBURG, OHIO.

SAP-SPOUT EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 513,591, dated January 30, 1894.

Application filed November 21, 1892. Serial No. 452,711. (No model.)

To all whom it may concern:

Be it known that I, MARVIN R. MOSS, a citizen of the United States, residing at Huntsburg, in the county of Geauga and State of Ohio, have invented certain new and useful Improvements in Sap-Spout Extractors; and I 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.

My invention relates to devices for extracting from trees the metal tubes or spouts, commonly called "spiles," which are used for conveying to the bucket the sap collected when trees are tapped for the purpose of making sugar, and consists in the combination of means for grasping the "spile," means for extracting it from the tree, and means for holding it after extraction until it is released.

In the drawings Figure 1 is a perspective view of my improved extractor partially opened; Fig. 2 a view of the same grasping the spout preparatory to drawing it from the tree; Fig. 3 showing the spout removed and held by the extractor; and Fig. 4 a view of the spout removed.

The extractor is made in the form of a pair of pliers, the handles A A' of which terminate respectively in the round jaw *a*, adapted to enter the tube or spout, and the hollowed jaw *a'*, adapted to fit the outside of the spout, thus insuring a tight grip and avoiding the bending or distorting of the spout. The jaw *a* is provided with a groove *b* along its upper side, allowing the escape of fluid or air when the jaw *a* fits the spout tightly. The jaws *a a'* are preferably held normally in the closed position by a coil or flat spring in the usual manner, as seen in Fig. 3, where *c* represents the spring, but a common rubber band around the handles A A' will answer the purpose perfectly well. From one of the handles, preferably A, a projection D extends forward and terminates in line with the jaws *a a'*, or nearly so. The other ends of the handles may be straight, but are preferably curved into a more or less

hooked shape, as at *e*, Fig. 1, to afford a better grasp for pulling out the spout, or one or both handles may be formed with a loop, as at *e'*—for the same purpose.

As is well known, the sap bucket is customarily suspended from the spout, and to prevent the spout from being loosened and drawn out by the weight of the bucket when full, it is driven tightly into the hole bored in the tree to tap it. Being usually of thin or sheet metal the spout is easily bent and ruined when improperly shaped tools, such as common pinchers or pliers, are used to remove it; and when hammered loose and then pried out it is often lost by falling or being thrown among dead leaves or snow which cover the ground in the sugar making season.

By the use of my improved extractor the bending of the spout is avoided, as the jaws substantially closely fit the spout, inside and out; no hammering or prying of the spout from side to side to loosen it is required; and the pull upon the spout being directly in the line of its length, the spout is not distorted nor the sides of the hole in the tree lacerated, so that it quickly grows over with sound bark when the spout is permanently removed.

To extract the spout the jaws of the extractor are slightly opened by separating the handles, the jaw *a* is inserted in the spout until the projection D bears against the tree, when closing the handles grips the spout tightly, a very slight downward pressure on the handles starts it loose, the projection D serving as a fulcrum, and a pull on the handles draws out the spout without injury; being held by the spring-pressed jaws of the extractor it cannot fall and be lost but remains securely held until removed and cared for.

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

1. The sap-spout extractor shown and described, having the conical jaw *a*, the concave jaw *a'*, and the fulcrum D projecting from one of the jaws in the plane in which the jaws move and to substantially the same length as the jaws, whereby the jaws are

adapted to grasp the spout without deforming it and to withdraw the spout without lateral flexure, substantially as described.

2. The sap-spout extractor having the
5 grooved conical jaw, a concave jaw, and a fulcrum integral with the conical jaw and extending in the plane in which the jaws move to substantially the same length as the jaws,

and a spring tending to keep the jaws closed, substantially as described.

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

MARVIN R. MOSS.

Witnesses:

H. P. KILE,

A. W. STRONG.