

(No Model.)

G. J. RECORD.  
SAP SPOUT.

No. 536,840.

Patented Apr. 2, 1895.

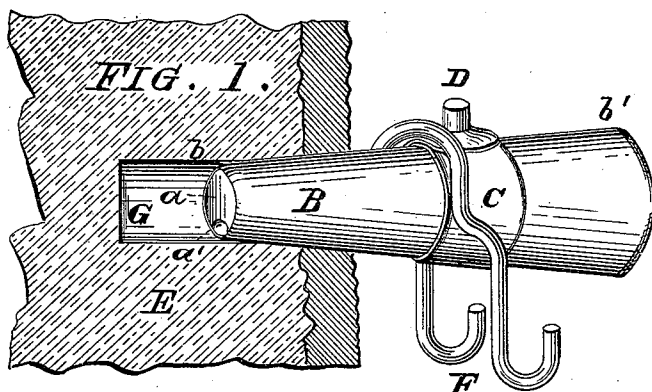


FIG. 3.

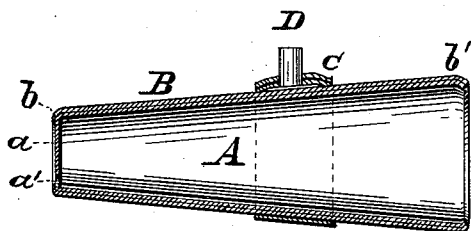


FIG. 5.

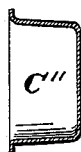


FIG. 6. FIG. 7. FIG. 8. FIG. 9. FIG. 10.

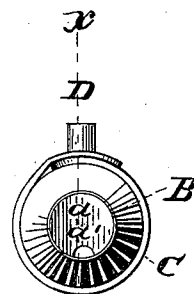


FIG. 2.

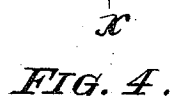


FIG. 4.

FIG. 12.

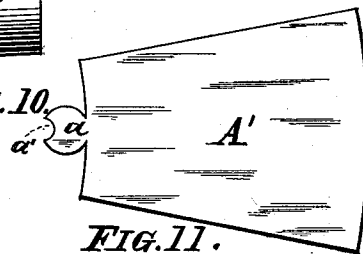
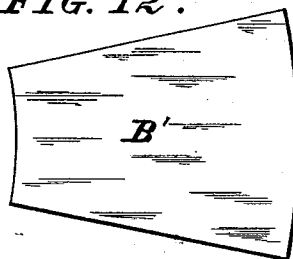


FIG. 11.

Witnesses:

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# UNITED STATES PATENT OFFICE.

GEORGE JOHN RECORD, OF CONNEAUT, OHIO.

## SAP-SPOUT.

SPECIFICATION forming part of Letters Patent No. 536,840, dated April 2, 1895.

Application filed September 19, 1894. Serial No. 523,456. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE JOHN RECORD, a citizen of the United States, residing at Conneaut, in the county of Ashtabula and State of Ohio, have invented certain new and useful Improvements in Sap-Spouts; and I do hereby declare that the following description of my said invention, taken in connection with the accompanying sheet of drawings, forms a full, clear, and exact specification, which will enable others skilled in the art to which it appertains to make and use the same.

This invention has general reference to improvements in sap spouts; and it consists, essentially, in the novel and peculiar combination of parts and details of construction as hereinafter first fully set forth and described and then pointed out in the claims.

In the drawings already referred to, which serve to illustrate my said invention more fully, Figure 1 is a perspective view of my improved sap spout. Fig. 2 is an end view of the same as seen from the smaller end. Fig. 3 is a longitudinal sectional view in line  $xx$  of Fig. 2. Fig. 4 is a transverse sectional view of the band and stay. Fig. 5 is a plan of a blank for the encircling band. Figs. 6, 7, 8, 9 and 10 are detail views of a band drawn from a circular blank. Fig. 11 is a plan of the blank for the inner, and Fig. 12, a similar view of the blank for the outer tube.

Like parts are designated by corresponding letters of reference in all the figures.

The object of this invention is the production of an efficient sap spout that can be readily and cheaply manufactured from sheet metal and sold at a reasonable price.

To attain this result, I construct this sap spout of an inner, tapering tube A, and an outer, similar tube B, said tubes being made from sheet metal blanks A' B', as shown in Figs. 11 and 12, and formed into conical shape by means of suitable formers. The blank A' for the inner tube is a segment of a ring of suitable diameter and has, at its smaller end and, preferably, in the center thereof, a circular projection  $a$ , provided with a notch or excision  $a'$ , said circular projection  $a$  serving as a bottom for the spout, and the notch  $a'$  as an inlet thereto. This circular projection  $a$ , being an integral part of the blank for the

inner tube and forming the bottom thereof, as stated, saves considerable time in the manufacture of the sap spout, since if this bottom were made in a separate piece its handling would be difficult and awkward, owing to its small size, besides adding to the cost of manufacture. The blank B' for the outer tube is a plain segment of a ring and also formed into conical shape in the manner indicated with reference to the inner tube.

The two tubes are placed one over the other with the abutting seams opposite each other and are provided with an encircling band C, made either from a blank C', as shown in Fig. 5, or drawn from a circular disk into cup-shape, as illustrated at C'' in Figs. 6, 7, 8, 9 and 10. When made from a blank C', I punch this blank in the shape of a segment of a ring and provide the ends thereof with perforations  $c$ , after which I form the blank into a ring or band, the perforations overlapping or registering and then pass a rivet D, through these perforations, (from the inner side thereof,) which rivet D will retain the band in proper shape and enable it being pushed upon the tapering tubes to hold the abutting joints in close contact until a complete union of the parts has been effected by dipping the spout into molten metal such as tin or its alloys, and thereby securely and permanently fastening them together.

The rivet D is of sufficient length to form a stay—so-called—behind which the hanger or bail F of a sap pail, (not shown,) may rest upon the band C where the two overlapping ends thereof form reinforcements and prevent the bail or hanger F from readily wearing through the same, it being a well-known fact that during use in winter time, the wind causes the sap pails to swing to and fro and therefore the bail or hanger to swing or move upon the band and to cause abrasion thereof.

When the band is made from a circular disk in the process of drawing, I produce the same by first forming a cup, as shown in Fig. 6. I then trim the edge of this cup, as illustrated in Fig. 7, after which the bottom of the cup is punched out, as indicated in Fig. 8. I now punch the hole  $c$  for the rivet and raise the protuberance around the same, as shown in Fig. 9, such a complete band with the rivet

and stay combined in position, being illustrated in Fig. 10, and forms an equivalent of the band and stay shown in Figs. 1, 2, 4 and 5.

It will now be readily observed that this entire sapsout is extremely simple in construction and that its component parts are all readily and cheaply produced by unskilled labor and that, therefore, this sap spout can be more cheaply manufactured than any other first class article for the purpose indicated with which I am acquainted.

By providing the sap spout with the bottom *a* and supplying this bottom with the notch *a'* forming a small inlet for the sap from the tap-hole *G* in the tree *E* to the sap-spout, I prevent air from entering the bore *G* into which the sap spout is driven and thereby the sap from drying up or freezing, the notch being made sufficiently small to pass all the sap which it is desired to draw from the tree.

In constructing this sap spout I prefer to form the smaller ends of the tubes with a slight inward turn at *b*, which will hold the bottom *a* in position and prevent it from being pushed out, while a similar inward turn *b'* at the larger end of the tubes prevents them from slipping off or being disarranged until they have been permanently secured together by the process of dipping into molten metal, as heretofore described.

Having thus fully described my invention, I claim as new and desire to secure to me by Letters Patent of the United States—

1. In a sap spout, two tapering tubes placed

one over the other, one of said tubes being provided with a circular projection forming the bottom of the spout, as and for the purpose set forth.

2. A sap spout consisting, essentially, of a taper tube having a bottom provided with a small inlet aperture at its smaller end, and a band surrounding said tube in about its middle and having projecting therefrom a stay having a head located between the band and tube and projecting from said band a sufficient distance to retain the bail of a sap pail, as and for the object set forth.

3. As an improved article of manufacture, a sap spout made from sheet metal and consisting, essentially, of two tapering tubes one placed within the other, the inner one of which having a bottom piece held in position by an inward turn at the smaller end of the outer tube, a band surrounding said outer tube and held together by a stud passing through the said band and projecting therefrom a sufficient distance to form a stay for the bail of a sap pail, the whole being permanently secured together by being dipped into molten metal, as specified.

In testimony that I claim the foregoing as my invention I have hereunto set my hand in the presence of two subscribing witnesses.

GEORGE JOHN RECORD.

Attest:

R. M. STEVENSON,  
W. T. FINDLEY.