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J. F. WARNER & G. D. JARVIS.

SAP SPOUT.

APPLICATION FILED APR. 4, 1903. RENEWED SEPT. 14, 1905.

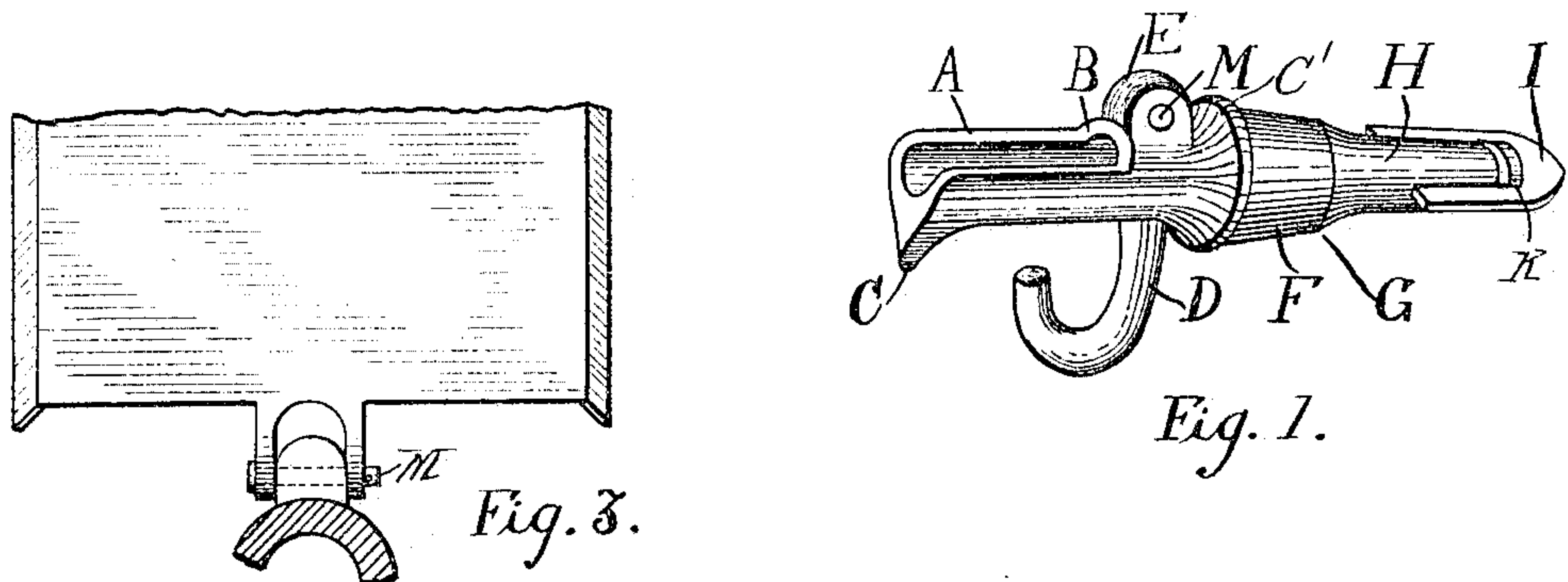


Fig. 1.

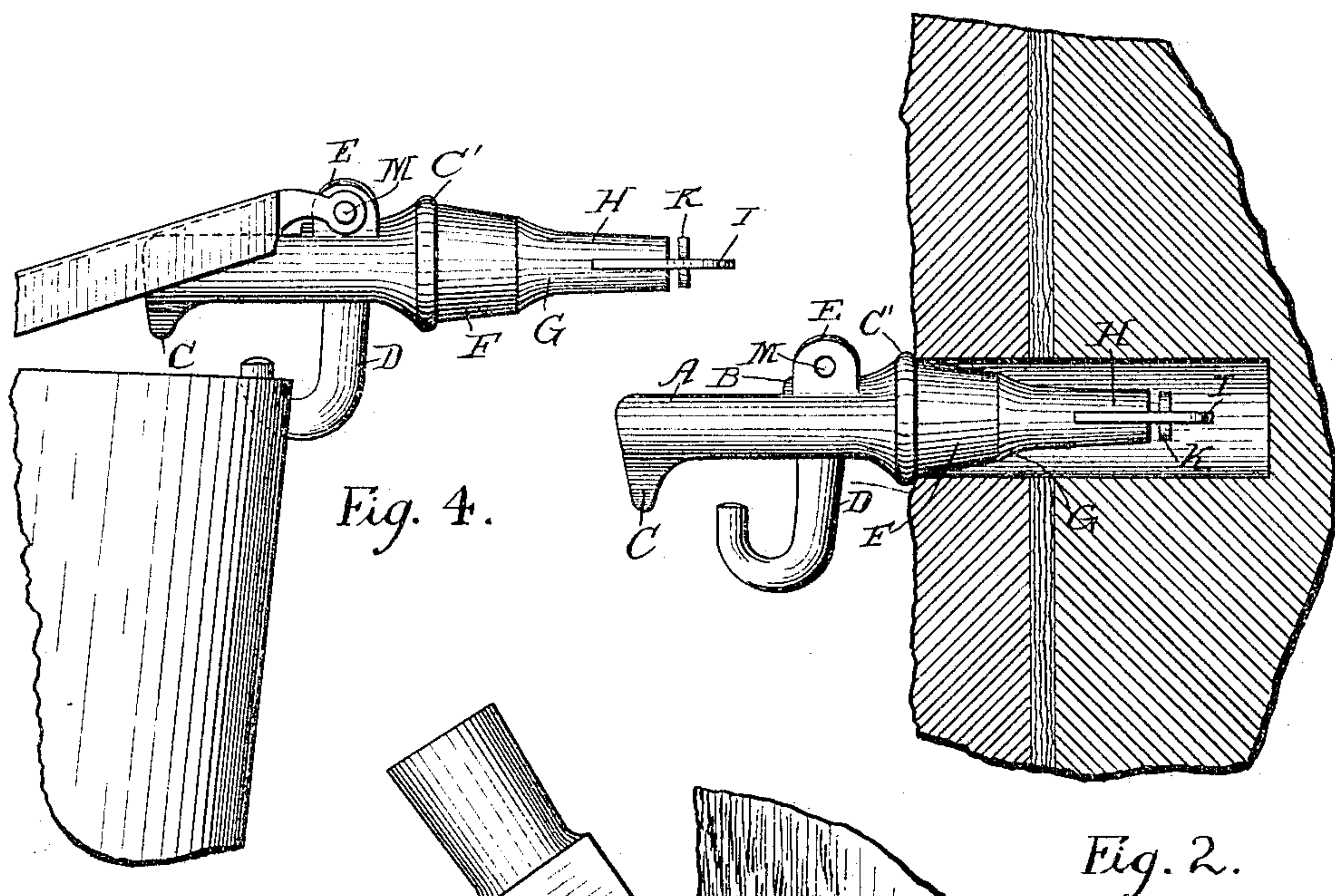


Fig. 4.

Fig. 2.

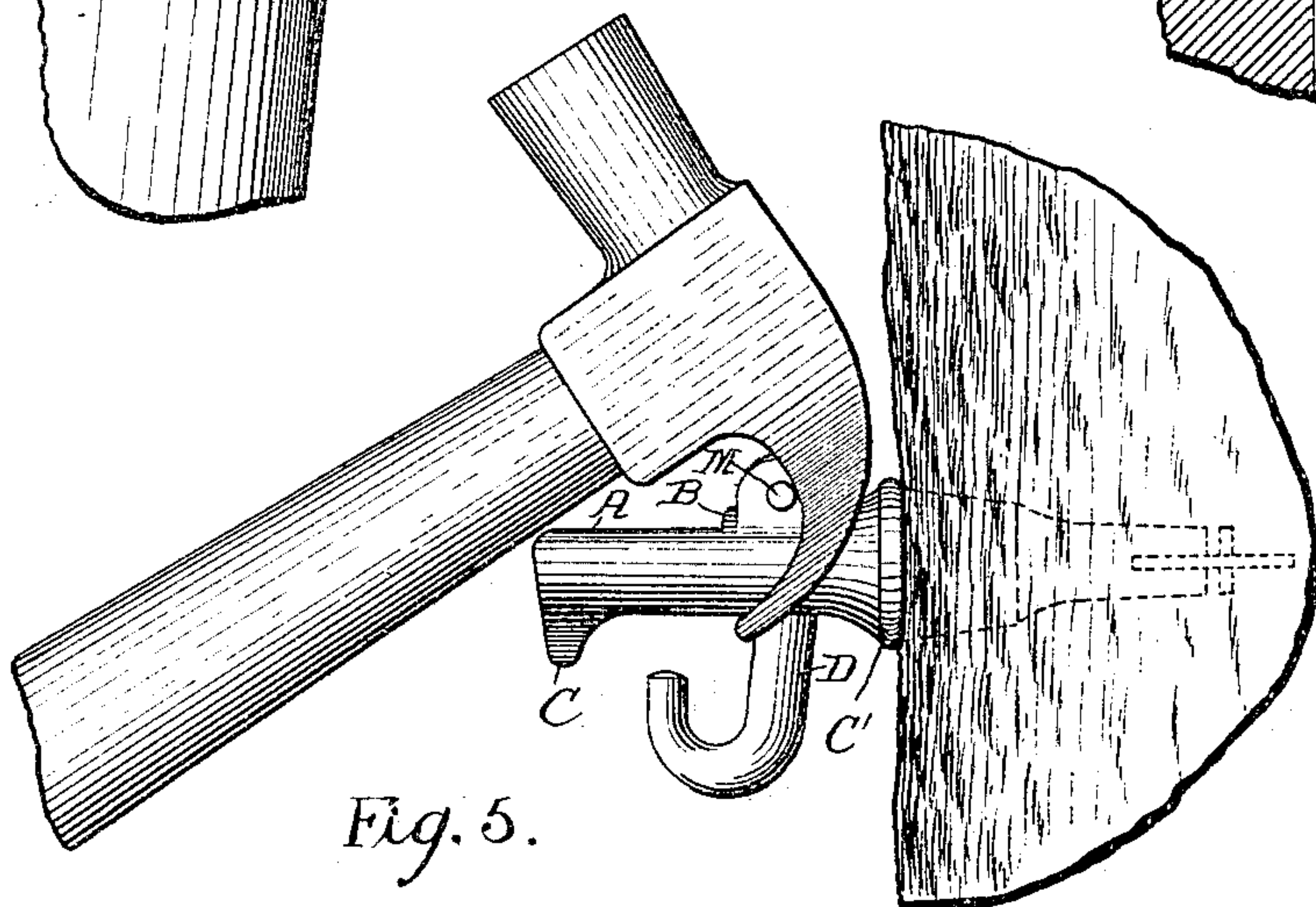


Fig. 5.

Witnesses:

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UNITED STATES PATENT OFFICE.

JAMES F. WARNER, OF ESSEX, AND GEORGE D. JARVIS, OF BURLINGTON, VERMONT.

SAP-SPOUT.

No. 801,755.

Specification of Letters Patent.

Patented Oct. 10, 1905.

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To all whom it may concern:

Be it known that we, JAMES F. WARNER, of Essex, and GEORGE D. JARVIS, of Burlington, county of Chittenden, State of Vermont, have
5 invented certain new and useful Improvements in Sap-Spouts; and we hereby declare the following to be a full, clear, and exact description of the invention, such as will enable those skilled in the art to which it appertains to
10 make and use the same.

Our invention relates to improvements in sap-spouts; and it consists in the peculiar construction of the same.

In the accompanying drawings, Figure 1 is
15 a perspective view of our sap-spout; Fig. 2, a side view showing the spout in a tree. Fig. 3 shows the bucket-cover attached to the bucket-hanger on our spout. Fig. 4 shows the hanging of the bucket on the spout when
20 desired, and Fig. 5 extracting the spout from the tree.

The object of our invention is to provide a sap-spout which is adapted to obtain the greatest amount of sap from a hole of predetermined
25 size.

A still further object of our invention is to provide a spout which will avoid the breaking or mashing of the bark around the opening, also avoid the breaking or mashing of the inner
30 bark next to the wood. This tissue of the inner bark next to the wood is a medium through which the tree is nourished, and to break it causes decay. Thus the life of the tree is lengthened by using this spout instead of any
35 other. Because of neither the inner nor the outer bark being injured the sap-hole will heal very rapidly.

Referring now to the drawings, A represents the portion of the spout that is outside
40 of the tree and may be of any form, but preferably of the form represented in the drawings. A part of the upper portion of this part is cut away at B and is provided at its extreme outer end with a drip-tongue C. The
45 said portion A is provided with a downwardly-extending hook D, by means of which the bucket is supported. Above said hook is an upwardly-projecting member E, which is at once a bucket-hanger that can be used in case
50 hook D is broken off, a bucket-cover holder, and a spout-puller by which we can withdraw the spout from the tree without any danger of breaking the same or injuring the tree, the

said upwardly-projecting member having a latitudinal hole M, through which a pin passes 55 to fasten the bucket-cover. Adjacent to said hook and projection there is an enlarged portion, as F, which rests within the opening in the tree. The said enlarged portion commences to taper from the point F and tapers very gradually to the point G, where it is provided with a reduced portion H, and has at its extremity a disk K. This is held in position by projections I, which extend from portion F on
60 either side and gradually taper to a point at their extreme inner end. The sap-spout has a centrally-extended opening going through the entire length thereof to the disk, said disk being separated from the portion H and of the same diameter, which prevents the circulation of air in the tree and also prevents
65 the spout from being clogged by chips and other substances that would interfere with the free flow of sap through the spout. A further object of these projections on either
70 side tapering to a point at the extreme end is that said projections at the very greatest diameter being a trifle more in diameter than the size of the sap-hole prevent this spout from tipping down or becoming loosened in
80 the tree by the weight of the sap in the bucket. Another object in having these projections on the side instead of the top and bottom is that they do not interfere with any flow of sap, as it is thoroughly demonstrated that
85 sap flows up and down in a tree. Therefore they do not block up any grain-surface through which the sap flows. The portion F being tapered, as is clearly shown, when the spout is driven home it is wedged within
90 the opening, and at the same time the taper is so gradual that it will not break the inner portion of the outer bark of the tree, but will completely close the opening, so that the sap cannot flow from around the spout or leak,
95 but will flow through the opening in the spout. The tapered portion is of such length that no portion thereof will enter the hole beyond the bark, and thus the sap from all the grains of the wood severed must find its
100 way back and through the opening in the spout. We also provide the spout at the largest diameter of the tapered portion with a flange C', which is adapted to engage the outer portion of the opening and prevent the
105 spout from being driven too far into the tree.

What we claim, and desire to secure by Letters Patent, is—

A sap-spout provided with a disk connected to the inner portion by projections on either
5 side fastened to said inner portion, the disk being separated but very near to said inner portion and of the same diameter, said projections being as wide as the spout where it enters the tree and coming to a point at the
10 extreme inner end of the spout, having also an upwardly-projecting member on the outer

portion which combines a device for hanging the bucket on the spout, fastening the bucket-cover by means of a hole through the same, and withdrawing the spout from the tree as
15 herein described and set forth.

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Witnesses:

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