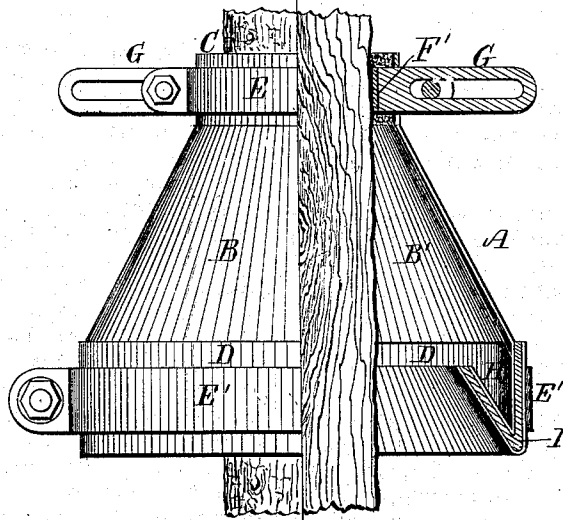


A. S. SMITH.  
Tree-Protector.

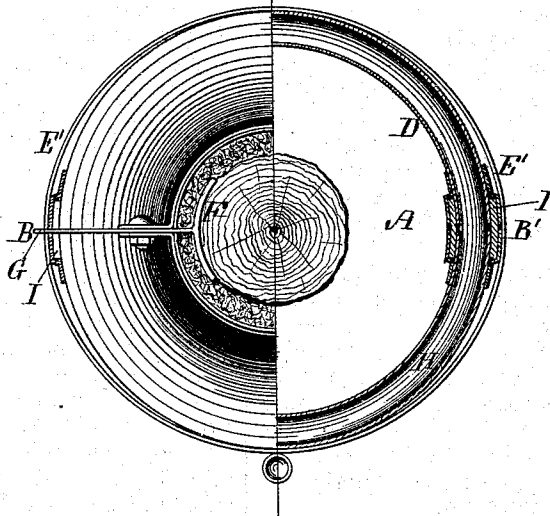
No. 198,701.

Patented Dec. 25, 1877.

*Fig. 1.*



*Fig. 2.*



Witnesses.  
*Wm. Turrell Andrews Jr.*  
*Lois A. Curtis*

Inventor.  
*A. S. Smith.*  
*J. Curtis. Atty.*

# UNITED STATES PATENT OFFICE.

ALBERT S. SMITH, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF  
HIS RIGHT TO LEANDER D. JUNKINS, OF SAME PLACE.

## IMPROVEMENT IN TREE-PROTECTORS.

Specification forming part of Letters Patent No. **198,701**, dated December 25, 1877; application filed  
November 30, 1877.

*To all whom it may concern:*

Be it known that I, ALBERT S. SMITH, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Tree-Protectors, of which the following is a specification:

This protector is made in sections, and is capable of being expanded or contracted in diameter, in order to adapt it to trees of varying sizes, the joint between the sections being of such character as to accommodate themselves to the changes in diameter of the protector, and avoid escape of material from the trough at such joints.

The drawings accompanying this specification represent, in Figure 1, a sectional elevation, and in Fig. 2 a sectional plan, of a tree-protector containing my improvement.

Referring to the said drawings, it will be seen that A represents my tree-protector as composed of two semi-frusto-conical hoods, B B', of equal size and shape, each terminating at top and bottom in a semitube or neck, C or D, the construction of the two being such that when closed together about the trunk of a tree they encircle the latter.

The two sections B B' are confined together at top and bottom by a hoop, E or E', which encircles the necks C or D, and is confined in any suitable manner; or the hoop may be dispensed with and ears cast upon the sections, through which bolts pass to effect the same result.

To support the protector about the trunk of a tree, and hold it securely in position thereupon under any change in its diameter, I employ two curved plates, F F', each of which is secured to one end of a bar, G, while the bars pass through apertures in the upper neck C of the protector, and are adapted to be securely clamped in position therein, the two plates being disposed opposite one another, as shown in Fig. 2 of the drawings.

The lower neck D of each section B B' terminates at bottom in an interiorly-arranged trough, H; and in order to make this trough continuous about the tree, and thus arrest the progress of insects that may attempt to as-

cend the trunk of the tree, I employ at each joint a V-shaped plate, I, which overlaps the contiguous edges of the joint, or enters similarly-formed pockets created in the ends of the necks C D.

In applying this protector to a tree, the sections are placed about the trunk of the tree, and confined together by the hoops E, or their equivalents, and the curved bearing-plates I I are then pushed closely up to, and so as to clasp opposite sides of, such trunk. A suitable material—such as hemp, for instance—is now stuffed tightly about the trunk of the tree, and between it and the upper neck C, in order to prevent ascent of insects at this point, and this being done, the trough H is filled with coal-tar, or other material which shall kill or arrest the progress of insects that may attempt to pass up over the outside of the protector.

It will thus be seen that my invention, while affording perfect protection against the ravages of the canker-worm, for which purpose it is mainly intended, is applicable to trees of varying diameter. It, furthermore, is quickly and easily applied, and may be manufactured at small cost.

I claim as my invention, and desire to secure by Letters Patent of the United States, the following:

1. The joint composed of the V-shaped plates I I, entering corresponding external pockets on the contiguous ends of the troughs H, whereby a continuous annular trough is provided, substantially as and for purposes stated.
2. The adjustable bearing or steadying plate F F', in combination with the sectional hoods B B', substantially as and for purposes stated.
3. A tree-protector composed of the sectional hoods B B', united in any suitable manner, and containing the troughs H, and the adjustable bearing or steadying plates F F', substantially as and for purposes stated.

ALBERT S. SMITH.

Witnesses:

F. CURTIS,  
LOUIS A. CURTIS.