

G. Frost,  
Tree Protector,  
No 54,141,      Patented Apr. 24, 1866.

Fig. 1.

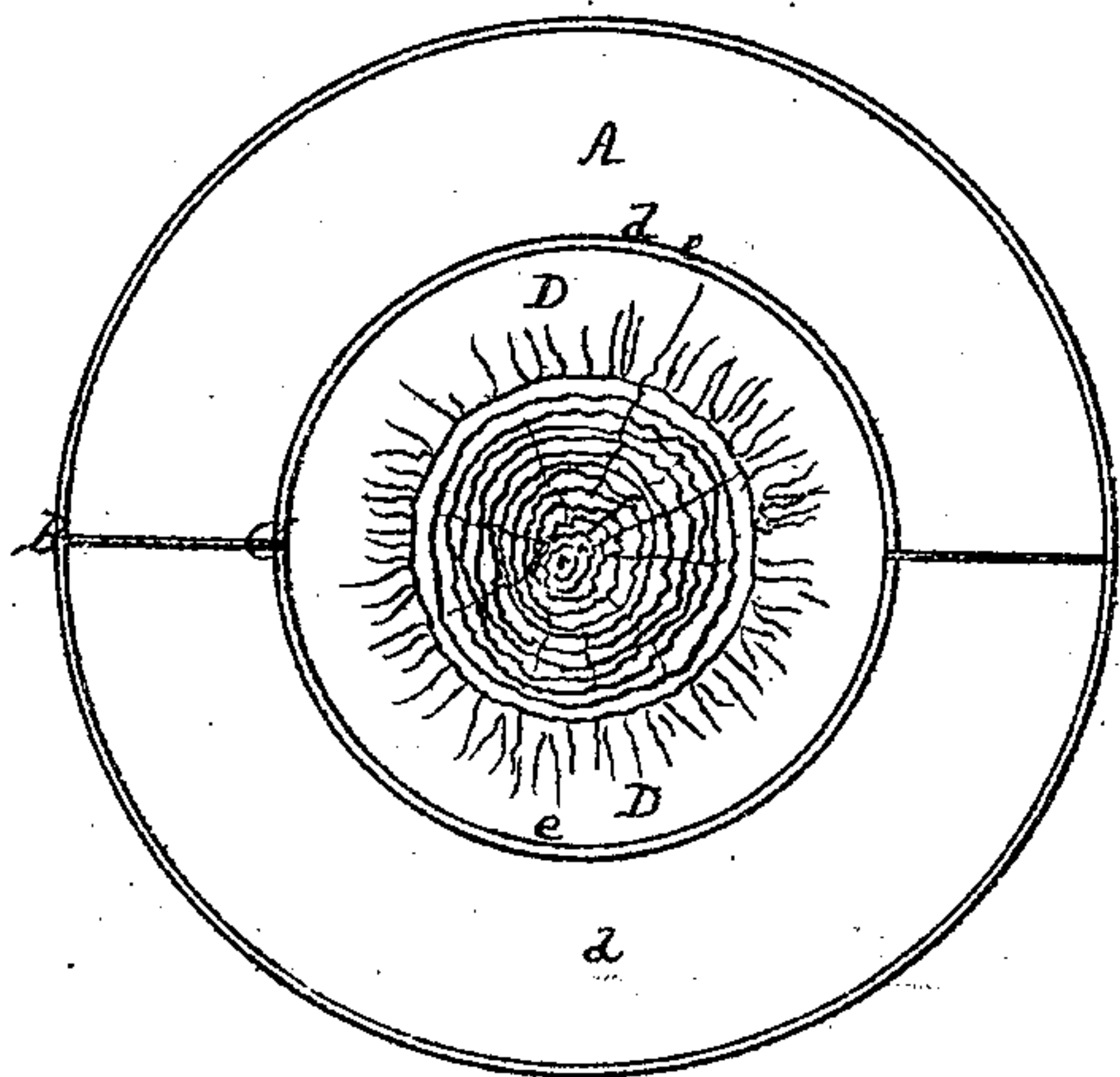


Fig. 2.

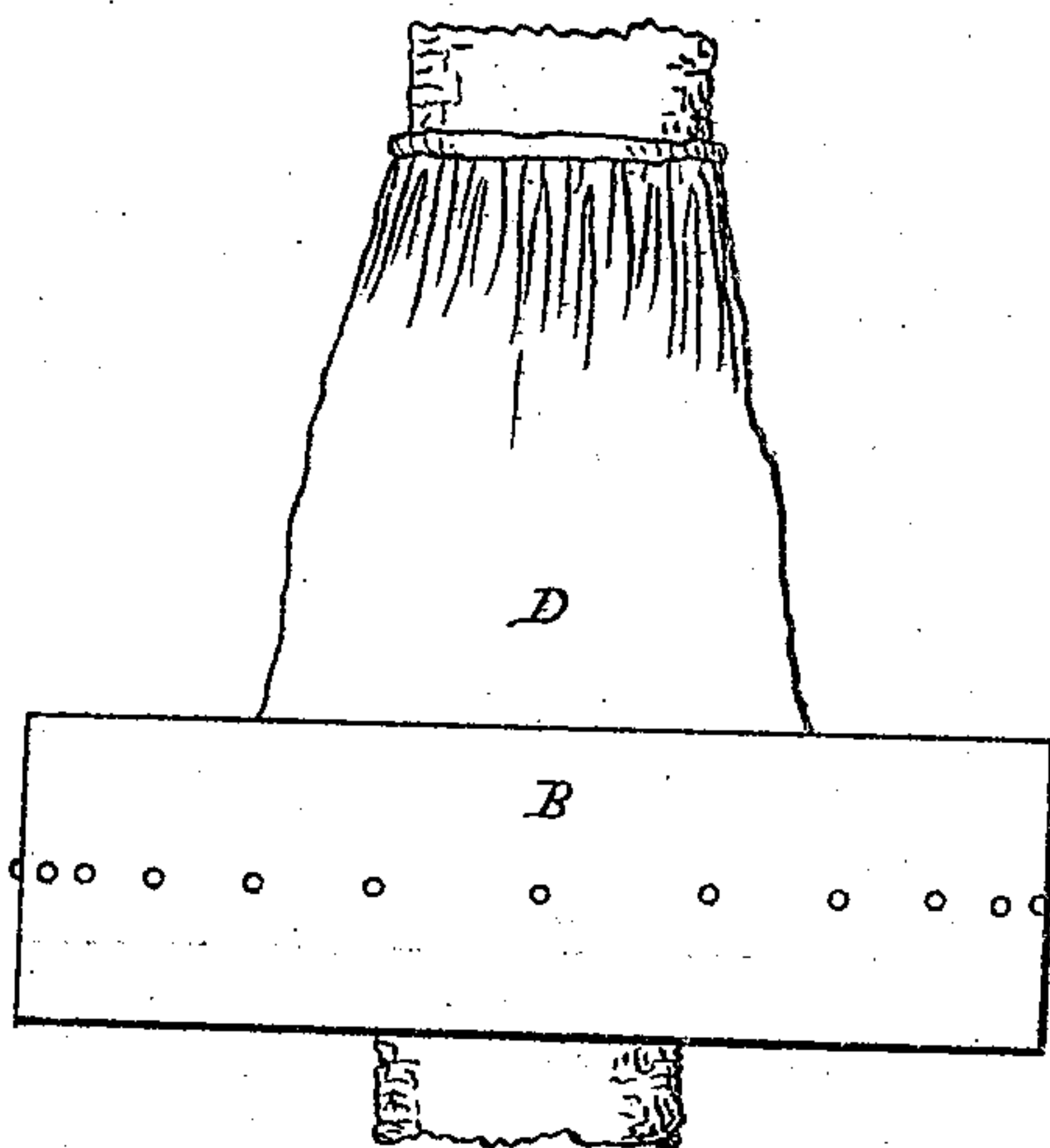
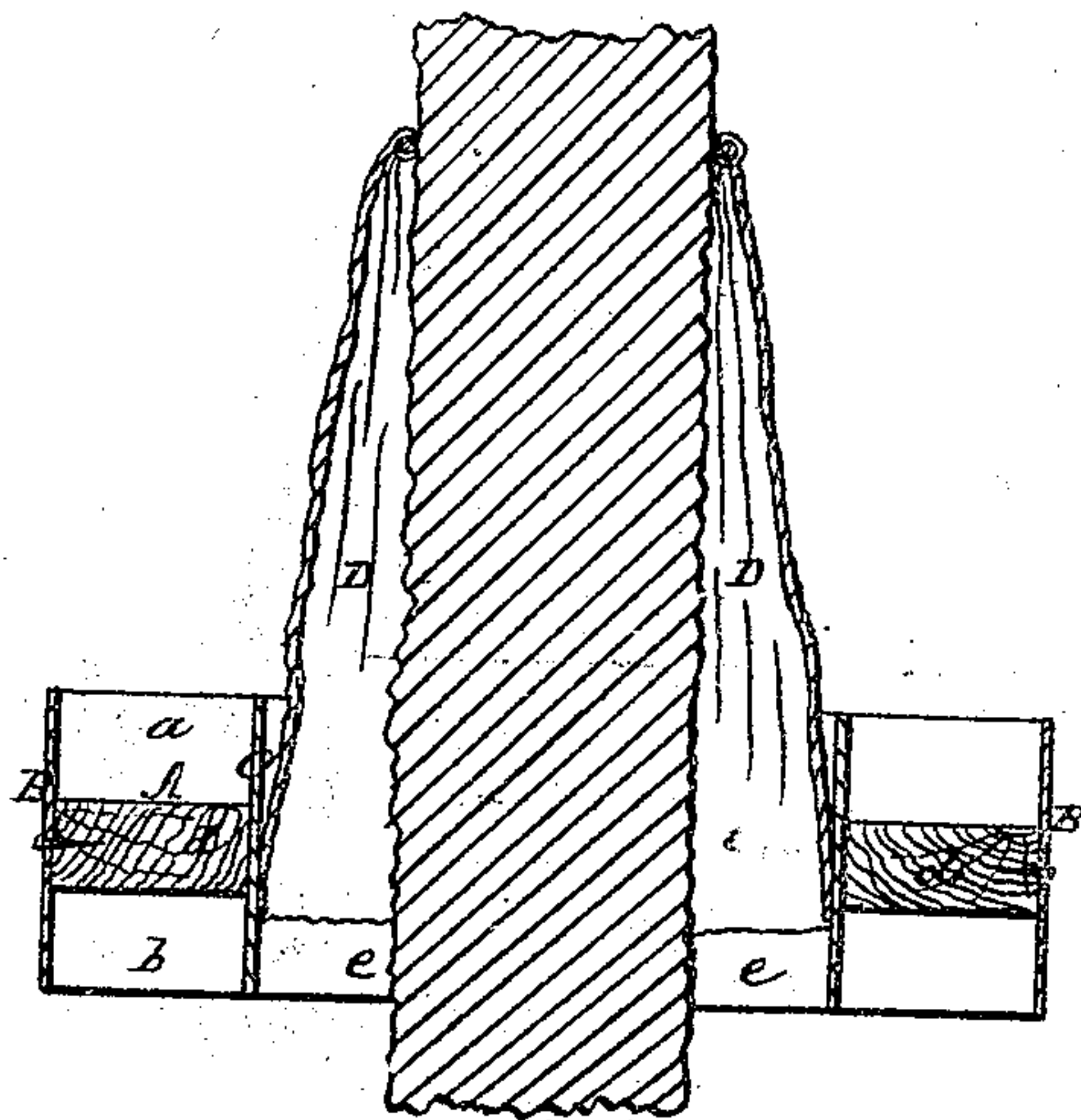


Fig. 3.



Witnesses.

*D. P. Hale Jr*  
*H. Curtis.*

Inventor.

*George Frost*  
by his attorney,  
*R. H. Ledy*

# UNITED STATES PATENT OFFICE.

GEORGE FROST, OF CAMBRIDGE, MASSACHUSETTS.

## IMPROVEMENT IN TREE-PROTECTORS.

Specification forming part of Letters Patent No. 54,141, dated April 24, 1866.

*To all whom it may concern:*

Be it known that I, GEORGE FROST, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented an Improved Tree-Protector; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a side elevation, and Fig. 3 a vertical section, of it.

In the said drawings, A is an annulus, made of wood or other material, arranged concentrically between two short tubes or hollow cylinders, B C, of smooth sheet metal, as zinc, for instance. Both of such tubes extend above and also below the annulus and are fastened to it, one being fixed to its outer and the other to its inner periphery, and so as with the said annulus to form two annular troughs or channels, *a b*, one of which is above and the other below the ring A. There is also fastened to the inner surface of the inner tube a cloth tent or suspensory-guard, D, which, at its upper end, is to encompass the trunk of a tree when applied to it, and is to be fastened thereto. The upper part of the guard D may be made like the top of a bag and be provided with a drawing-string, by which it may be gathered about and secured to the tree. Furthermore, instead of fixing the guard D to the upper edge of the tube C, I attach it to the tube at some distance below its upper edge, and, in further making the tree-protector, I form the ring A of two semi-rings, *d d*. I also make the internal tube, C, of two semi-tubes, *e e*, and I construct the outer tube, B, of a single strip of metal, which I bend around the ring A, and so that the two ends of the strap may meet together and the strap lap over the joints of the two pieces *d d*. Finally, I construct the suspensory-guard D of a piece of cloth, which I fasten to one of the two parts *e e* before it is applied to a tree, and to the other after it has been so applied. The ends of the piece of cloth are to extend by one another, so as to make a close joint, or one through which the grubs or worms cannot pass. These ends may be sewed together after the protector may have been fixed to a tree. The inner tube, C, is to have a diameter some-

what—say about three inches—larger than that part of the trunk of the tree encompassed by it.

If desirable, the lower surface of the ring A may be covered with tar or other suitable viscid matter calculated to serve as an impediment to the passage of the canker-worm or grub across such surface. The upper surface of the ring may also be covered.

In an attempt to ascend the trunk of the tree a grub will pass into the space between the trunk and the suspensory-guard. On finding such guard a hinderance to his further upward progress, the grub will crawl down the inner surface of the guard until he meets the smooth surface of the inner tube, C. Should he succeed in descending such inner surface, an attempt to turn its lower edge will generally cause him to drop off the protector; but should he be successful in getting around such edge and crawl up the outer surface of the tube he will meet the tarred lower surface of the ring, by which he may be estopped; but in case of his passage across it and down the inner surface of the outer tube, he will be likely to fall off the same in attempting to turn its lower edge. So, should he succeed in ascending the outer surface of the outer tube, his progress will be further impeded by the trough *a*. Thus it will be seen that the combination and arrangement of the parts of this tree-protector cause it to present a series of impediments to the grub, each of which is quite likely to be effective in preventing him from further progress.

By fixing the suspensory-guard to the inner surface of the tube C at a distance from its upper edge, any rain-water which may run down the guard will not pass into the trough *a*, but will be discharged through the tube C. Thus dirt from the tree will be prevented from being washed into the trough *a*.

I do not claim as my invention a tree-protector composed of an annular trough and a suspensory-guard or tent to go around the trunk of a tree, the said trough being to hold a liquid.

I claim—

1. The arrangement of the ring A and the two



tubes B C, when combined with the suspensory-guard D, the two tubes under such an arrangement being made to project both above and below the ring, as explained.

2. The arrangement of the suspensory-guard D with respect to the upper edge of the inner tube, C, of the trough *a*—viz., below the said

edge, and so that there may be an annular channel between the guard and the tube, as represented.

GEORGE FROST.

Witnesses :

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