

W. & D. McCAINE.

Tree Protector.

No. 55,776.

Patented June 19, 1866.

Fig. 1.

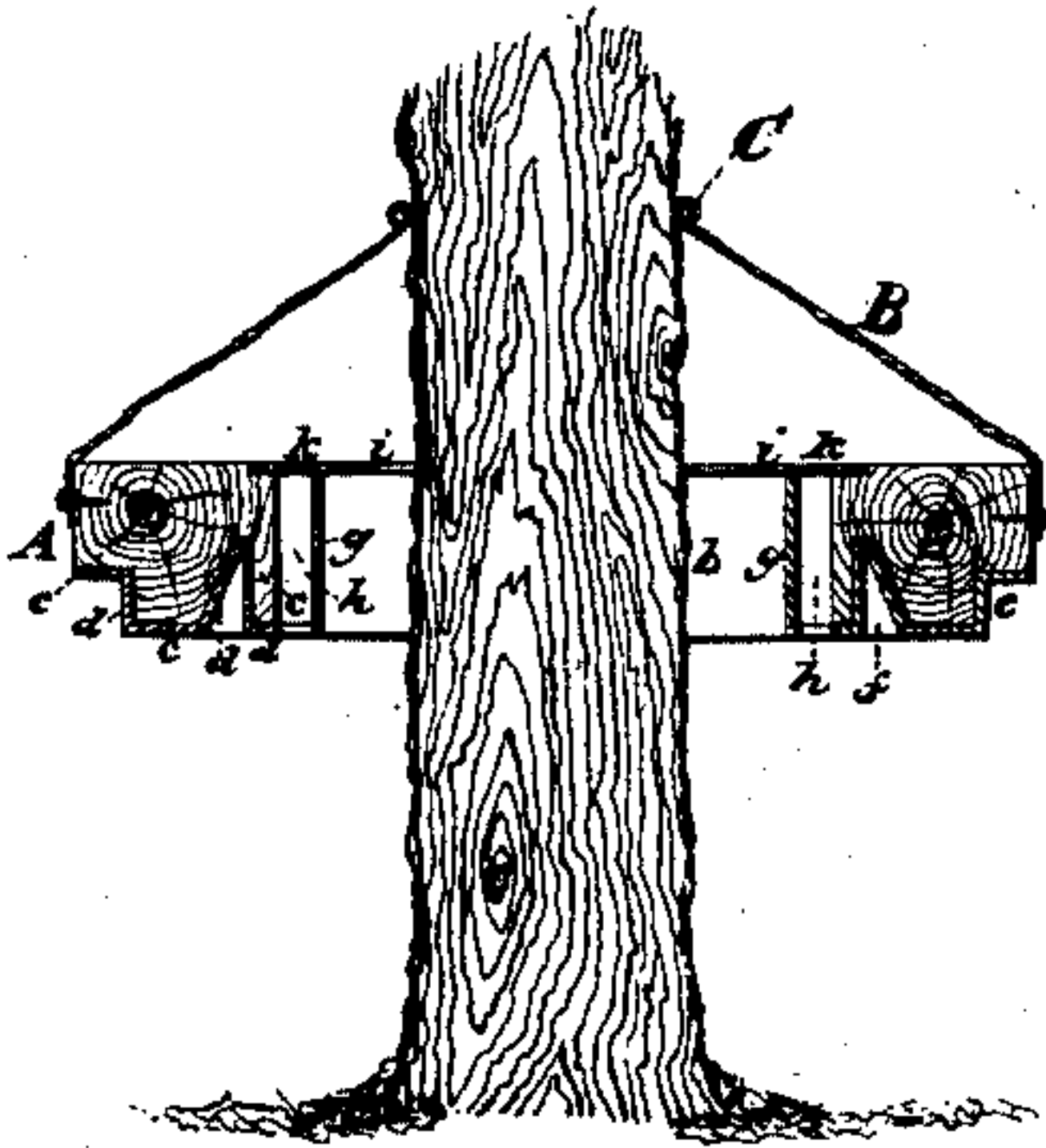


Fig. 5.

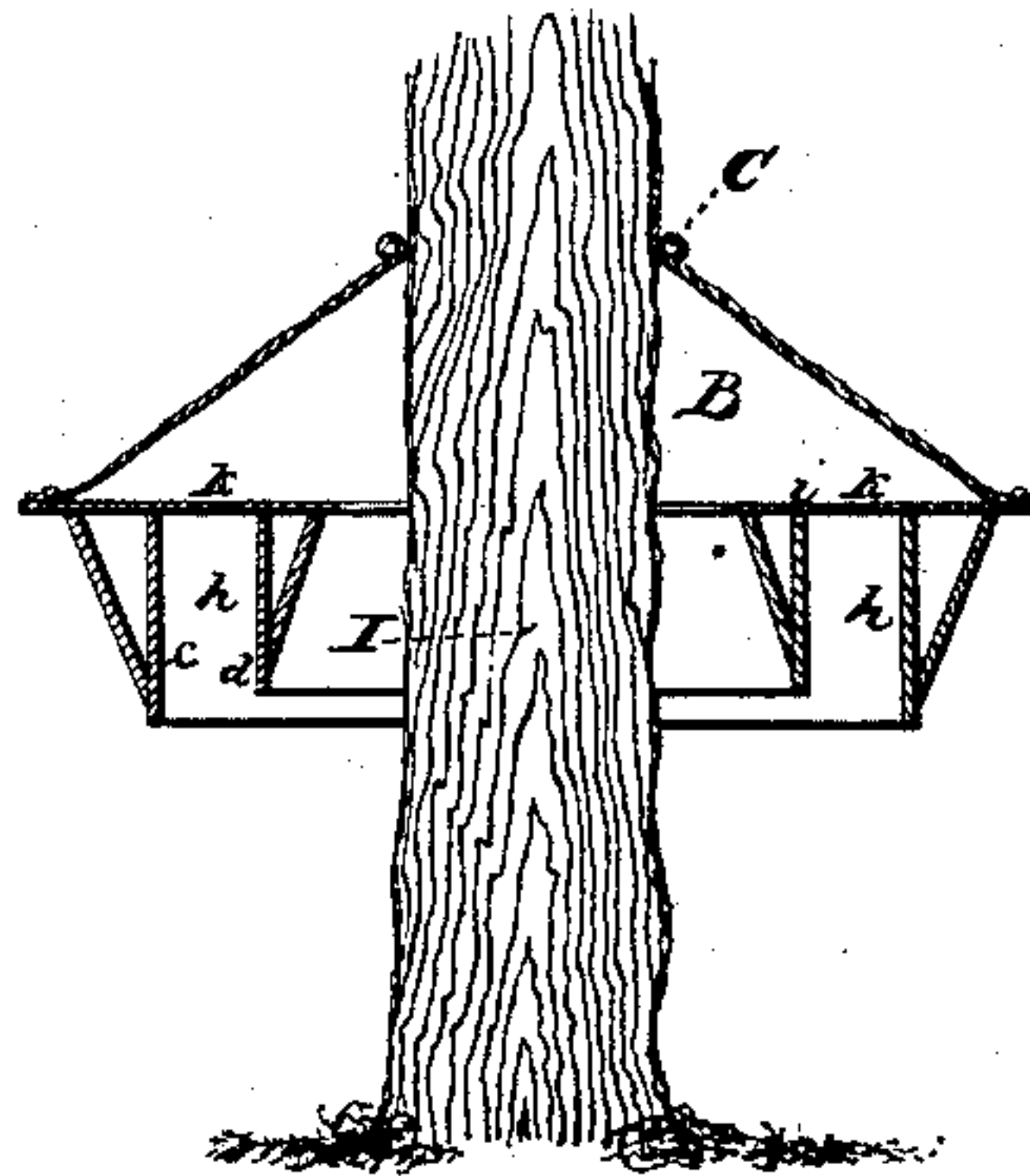


Fig. 2.

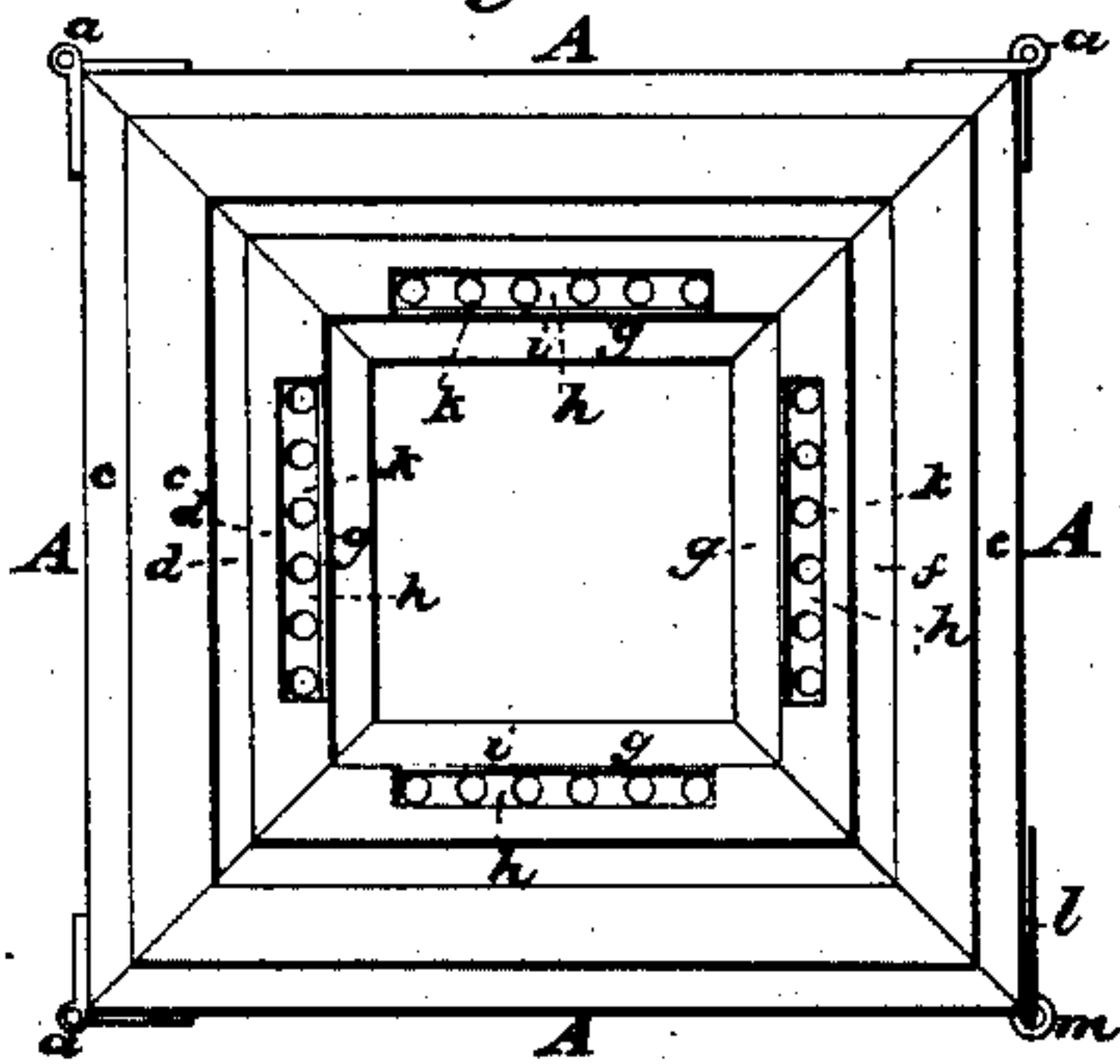


Fig. 4.

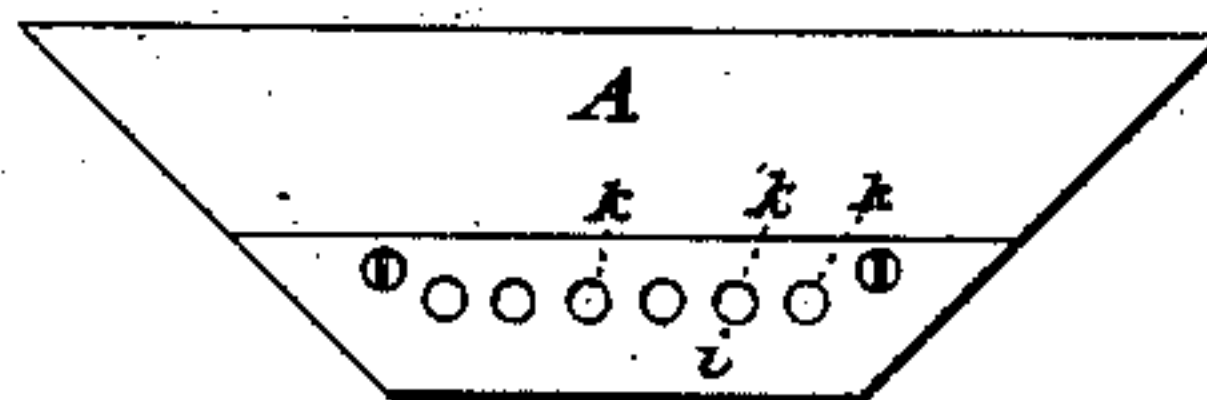
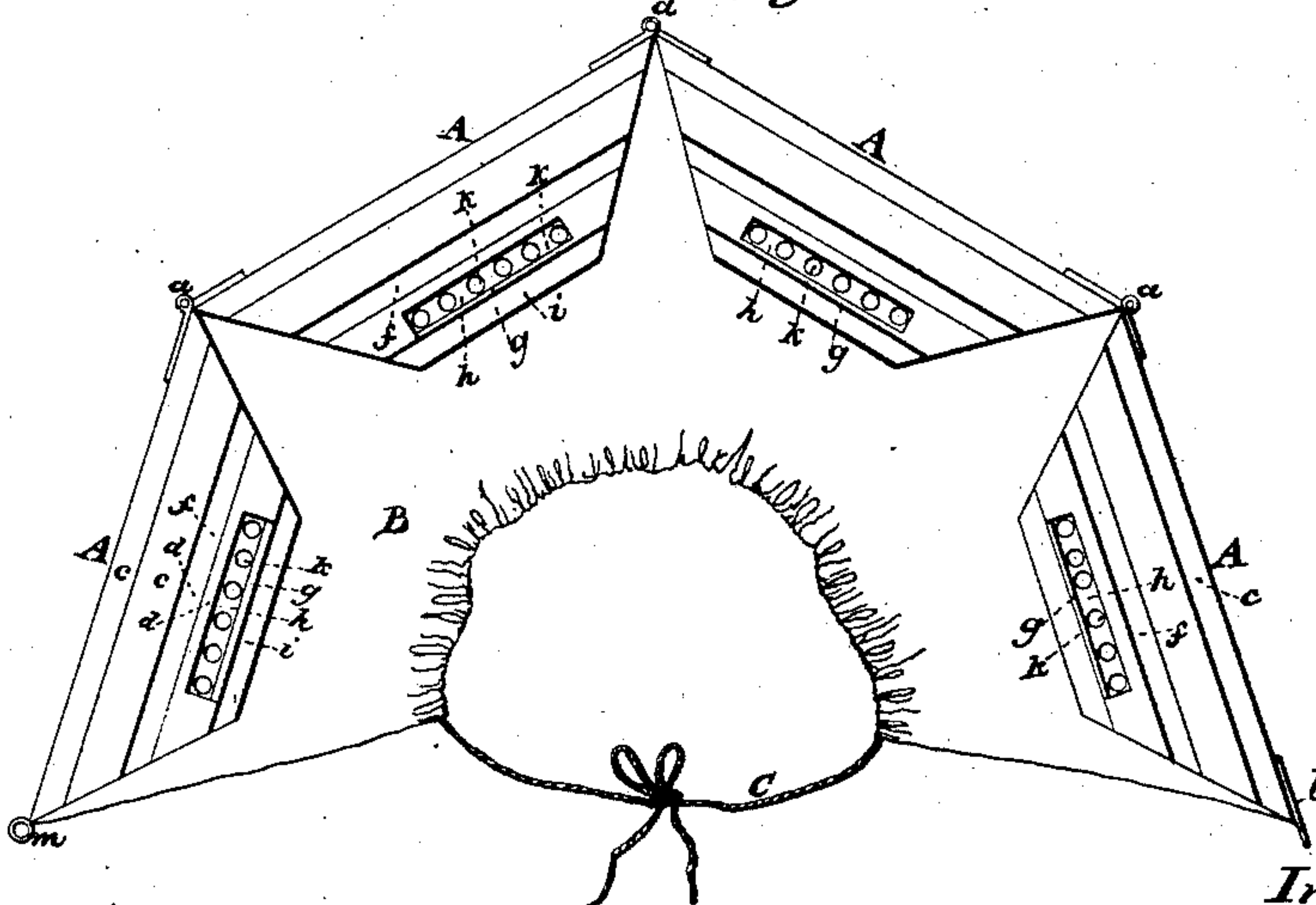


Fig. 3.



Witnesses:

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by their Attorney.

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UNITED STATES PATENT OFFICE.

WILLIAM McCAINE AND DAVID McCAINE, OF GROTON, MASS., ASSIGNORS
TO THEMSELVES AND DANIEL McCAINE, OF SAME PLACE.

IMPROVEMENT IN TREE-PROTECTORS.

Specification forming part of Letters Patent No. 55,776, dated June 19, 1866.

To all whom it may concern:

Be it known that we, WILLIAM McCAINE and DAVID McCAINE, of Groton, in the county of Middlesex and State of Massachusetts, have invented a new and useful or Improved Tree-Protector; and we do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 denotes a vertical section of the said protector as applied to the trunk of a tree. Fig. 2 is an under-side view of it as it appears when closed together. Fig. 3 is an under-side view of it as open preparatory to being applied to a tree. Fig. 4 is a top view of one of the sections.

It is made in four or more sections, A A A A, which are hinged together, as shown, at *a a a*, such sections being so constructed that when closed together they may be in the form of a square or regular polygon. To the outer edges of these sections the base of a tent or piece of cloth, B, is fastened, such tent being provided at its upper edge with a gathering-string, C, by which it may be drawn close up to and around and fastened to a tree, in order that the sections may be suspended by the tent, and with an annular space, *b*, between them and the tree.

Each section is to have a series of glass plates, *c c c d d d*, applied to its surfaces, and so arranged that each plate shall be at an angle with the plate next to it, the edges of the two being in contact. Some of these plates may be set in rabbets or grooves and against the sides thereof, such grooves and rabbets being shown at *e f*, formed in each section. Furthermore, against the inner side of each section A, we place a plate, *g*, of glass, and so as to form one side of a vertical passage, *h*, made in the section. This passage at its top we cover by a tin or metallic plate, *i*, perforated with a series of holes, *k k k*, leading into the passage, and each being of a diameter just large enough for a grub to pass through it.

The ends of the two extreme sections A A have a hook, *l*, applied to one to take into an eye or staple, *m*, extending from the other.

After a tree-protector so made may have been applied to a tree the edges of the tent,

where they come together, should be sewed or pressed, so as to prevent a grub from passing between them.

We have found that with two plates of glass arranged at an angle with each other on the sides of a section such as described it is very difficult for a grub to turn the vertex of the angle, so as to pass from one plate to the other, whether such angle be salient or re-entering. Furthermore, we have discovered that the groove or rabbet having plates of glass applied to its sides, as described, is an additional impediment to the passage of the grub by the angle of juncture of the plates. We have also found that with the passage *h*, and the cover thereto, provided with holes *k k k*, the grub will perform a very curious operation—that is to say, having ascended the tree into the space within the tent she will pass down the inner surface of the tent and across the top or plate *i* of one of the sections. She will not descend through one of the holes *k*, but will pass entirely across the plate *i*, and turn around its inner edge and descend on the surface of the glass plate *g*. Instead of going across the lower end of the passage *h*, she will pass into and up the said passage and through one of the holes *k*; after which she will again pass to the inner edge of the plate *i*, and from thence will again descend the plate *g* and ascend the passage *h*. Thus she will continue to go around and around in such a course until, wearied by the exertions made, she will either drop to the ground or be compelled to deposit her eggs on the section.

The passage *h* may entirely circumscribe the tree, holes being made in the top plate of such passage.

Another form in which we have contemplated the application of our invention is exhibited in Fig. 5, which is a vertical section of a tree-protector made with our improvements, B being the tent, *i* an annular plate to which the base of the tent is fastened. *c* and *d* are the glass plates, *h* the vertical passage, *k k* its top holes, and *I* the tree.

We do not claim the employment of plates of glass in the formation of a tree-protector.

What we claim as our improvement in the tree-protector is—

1. The arrangement of its plates of glass so that each two which are next adjacent shall make an angle with each other in a vertical direction at their junction.

2. The arrangement of two of such glass plates in a groove or rabbet, and so as to meet together and make angles with each other in a vertical direction.

3. The arrangement and combination of the passage *h* and its holes *h h* in the top plates of glass, *c c d d*, arranged as specified.

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Witnesses:

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