

(No Model.)

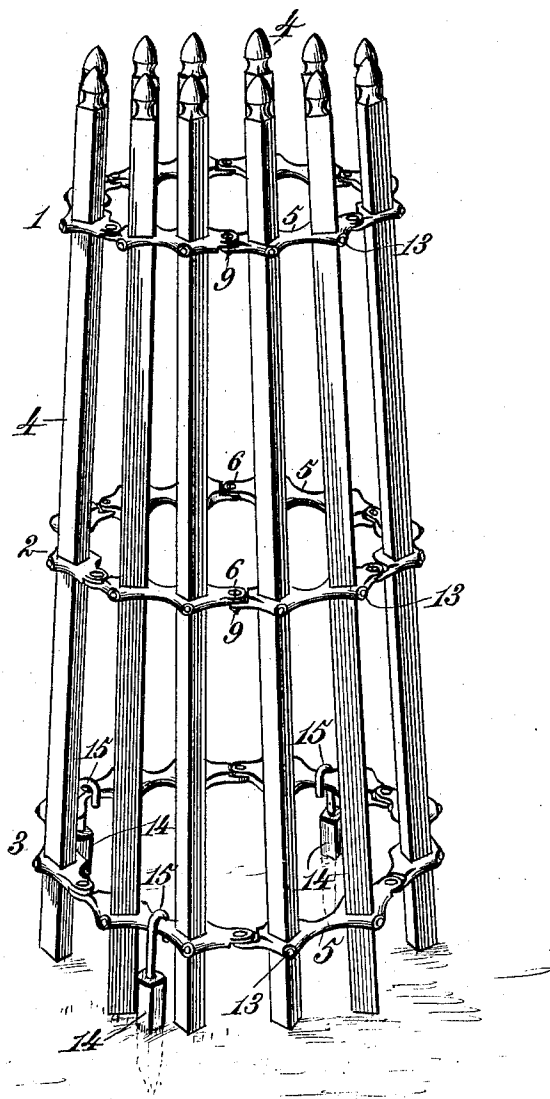
2 Sheets—Sheet 1.

W. CLAPP.
TREE PROTECTOR.

No. 466,654.

Patented Jan. 5, 1892.

Fig. 1.



Witnesses,
Phat Everett,

J. A. Rutherford.

Inventor.

William Clapp.

By James L. Norris

Atty.

(No Model.)

2 Sheets—Sheet 2.

W. CLAPP.
TREE PROTECTOR.

No. 466,654.

Patented Jan. 5, 1892.

Fig. 2.

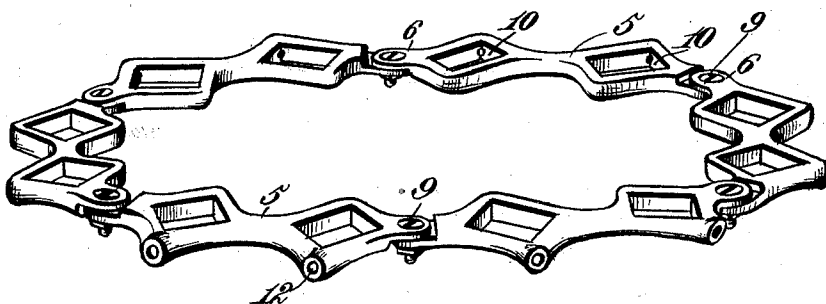


Fig. 3.

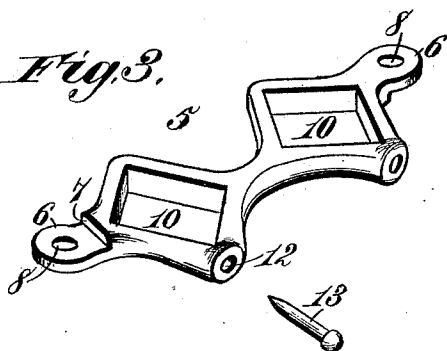
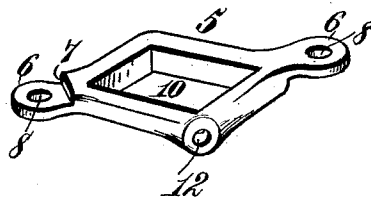


Fig. 4.



Witnesses.
Robert Everett,
J. A. Rutledge.

Inventor
William Clapp.
By *James L. Norris.*
Atty.

UNITED STATES PATENT OFFICE.

WILLIAM CLAPP, OF COHOES, NEW YORK.

TREE-PROTECTOR.

SPECIFICATION forming part of Letters Patent No. 466,654, dated January 5, 1892.

Application filed August 20, 1891. Serial No. 403,187. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM CLAPP, a citizen of the United States, residing at Cohoes, in the county of Albany and State of New York, have invented new and useful Improvements in Tree-Protectors, of which the following is a specification.

This invention relates to that class of tree-protectors which are composed of sectional rings provided with pickets to form a boxing which extends round the tree for the purpose of guarding and shielding the same from injury and at the same time constitute an ornamental fixture.

The object of my invention is to provide a novel construction of ring which can be enlarged or reduced in diameter for the purpose of varying the size of the tree protector or boxing to suit the conditions required by the diameter of the tree.

To accomplish this object my invention consists in a tree-protector ring composed of a series of picket-carrying link-sections formed as small segments of a circle and each having a picket-receiving socket and a lateral pin-receiving hole extending to and opening in the socket for the passage of a pin to lock the picket and link-section together, said link-sections being detachably connected at their extremities, so that any link-section can be removed or a link-section inserted for the purpose of diminishing or enlarging the diameter of the tree-protector.

The invention is illustrated by the accompanying drawings, in which—

Figure 1 is a perspective view of a tree-protector constructed in accordance with my invention. Fig. 2 is a detail perspective view of one of the picket-supporting rings. Fig. 3 is a detail perspective view of one of the picket-carrying link-sections, and Fig. 4 is a similar view of a modified construction of link-section for receiving a single picket.

In order to enable those skilled in the art to make and use my invention, I will now describe the same in detail, referring to the drawings, wherein—

The numerals 1, 2, and 3 indicate a set of three rings, which support the pickets 4, for the purpose of forming a circular tree-protector or boxing. The rings respectively engage the upper end portions, the central por-

tion, and the lower end portions of the pickets, and the rings increase in diameter from the uppermost one to the lowermost one, in order to provide a tree protector or boxing which is tapering in outline. The pickets are square or angular in cross-section and are composed of wood and are introduced through picket-receiving sockets formed in the sections of the rings, as will more fully hereinafter appear. The rings are each composed of a gang of link-sections 5, and, as illustrated, the gang comprises six sections. The link-sections are formed at each extremity with a projecting ear 6, of a thickness less than the thickness of the link-body, in order to provide a shoulder 7. The ears are formed with bolt-receiving orifices 8, and the ears of one link-section overlap the ears of contiguous link-sections, so that by passing clamping-bolts 9 through the bolt-receiving orifices the gang of link-sections can be rigidly connected to produce a tree-protector ring. The link-sections are each formed with a pair of picket-receiving sockets 10, which are square or otherwise angular, to receive and accurately fit the pickets 4. The link-sections are provided at their outer edges with lateral pin-receiving holes 12, which extend to and open in the picket-receiving sockets in such manner that picket-retaining pins 13 can be driven through the holes into engagement with the wooden pickets, thereby firmly securing the pickets in position and preventing movement of the ring on the pickets. I prefer to form each link-section with a pair of picket-receiving sockets 10; but obviously each link-section may be formed with a single picket-receiving socket, as exhibited by the modified construction Fig. 4. The link-sections are preferably composed of malleable iron; but of course other metal may be employed. The peculiar construction of the link-sections with the lateral pin-receiving holes 12, extending to and opening in the picket-receiving sockets 10, is very desirable, in that it provides a simple and economical means for rigidly securing the pickets in proper position relatively to the ring and effectually prevents movement of the ring longitudinally along the pickets. The link-sections each constitute a small segment of a circle, so that a large number of the sections are required to

produce a ring which forms a complete circle. The object of this specific construction is to render any one of the link-sections susceptible of being removed for the purpose of reducing the diameter of the tree-protector. At the same time the specific construction described and shown renders it possible to insert an additional section for the purpose of enlarging the diameter of the tree-protector.

10 If a picket-carrying link-section is removed, the extremities of the two adjacent links of the tree-protector ring are brought together and secured by one of the clamping-bolts, thereby materially reducing the diameter of the ring, if such should be desired. This is a result which cannot be accomplished in a tree-protector ring which is composed of two semicircular sections united at their contiguous ends.

20 The different sizes of rings for producing a tapering protector or boxing can be conveniently produced by my invention, because any picket-carrying link-section of a ring can be removed for the purpose of reducing the diameter of such ring, and likewise a picket-carrying link-section can be inserted for the purpose of enlarging the diameter of the ring. It will therefore be obvious that I can conveniently produce tree protectors or boxings which are tapering in form, and at the same time such protector or boxing can be made parallel-sided by simply introducing picket-carrying link-sections into the two uppermost rings.

35 I have exhibited the tree protector or boxing as provided with a set of three rings; but obviously the central ring is not indispensable. It is, however, preferable to employ it for the purpose of rendering the protector more symmetrical and ornamental in appearance. The link-sections for the uppermost ring may be made on a somewhat smaller scale than the link-sections for the lowermost ring, and in this way the tapering form of the tree-protector can be produced; or, as before stated, the tapering form can be produced by removing a link-section from the uppermost ring in order to reduce its diameter.

50 I do not wish to be understood as claiming the mere sectional construction of a tree-protector ring, as such does not constitute my invention. On the contrary, my invention involves the construction of a tree-protector ring which is susceptible of being enlarged or

diminished in diameter by inserting or removing a picket-carrying link-section. The invention also involves the formation of each link-section with a picket-receiving socket and a lateral pin-receiving hole extending to and opening in the socket, so that a locking-pin can be driven into the picket for the purpose of locking the picket and ring together and preventing movement of one relatively to the other.

65 In order to retain the tree-protector in correct position relatively to the tree, I provide a set of three wooden plugs 14, which are driven into the ground and each provided with an attached hook 15, engaging the lowermost tree-protector ring. These plugs are arranged at equal distances apart, and after they are firmly secured in the ground the hooks serve to retain the tree-protector in proper position. In practice the plugs are first driven into the ground and the hooks are driven into the plugs until the hooked portions are in engagement with the lowermost ring of the tree-protector.

Having thus described my invention, what I claim is—

80 1. A tree-protector ring consisting of a series of picket-carrying link-sections formed as small segments of a circle and each constructed with a picket-receiving socket, and a lateral pin-receiving hole extending to and opening in the socket for the passage of a pin to lock the picket and link-section together, said link-sections being detachably connected at their extremities, so that any link-section can be removed or a link-section inserted for the purpose of diminishing or enlarging the diameter of the tree-protector, substantially as described.

95 2. A tree-protector ring consisting of a series of detachably-connected link-sections formed as small segments of a circle and each having a picket-receiving socket, a lateral pin-receiving hole extending to and opening in the socket, and perforated ears of a thickness less than the thickness of the section, substantially as described.

In testimony whereof I have hereunto set my hand and affixed my seal in presence of two subscribing witnesses.

WILLIAM CLAPP. [L. S.]

Witnesses:

JOHN B. SWARTZ,
FRANK H. GRITMON.