

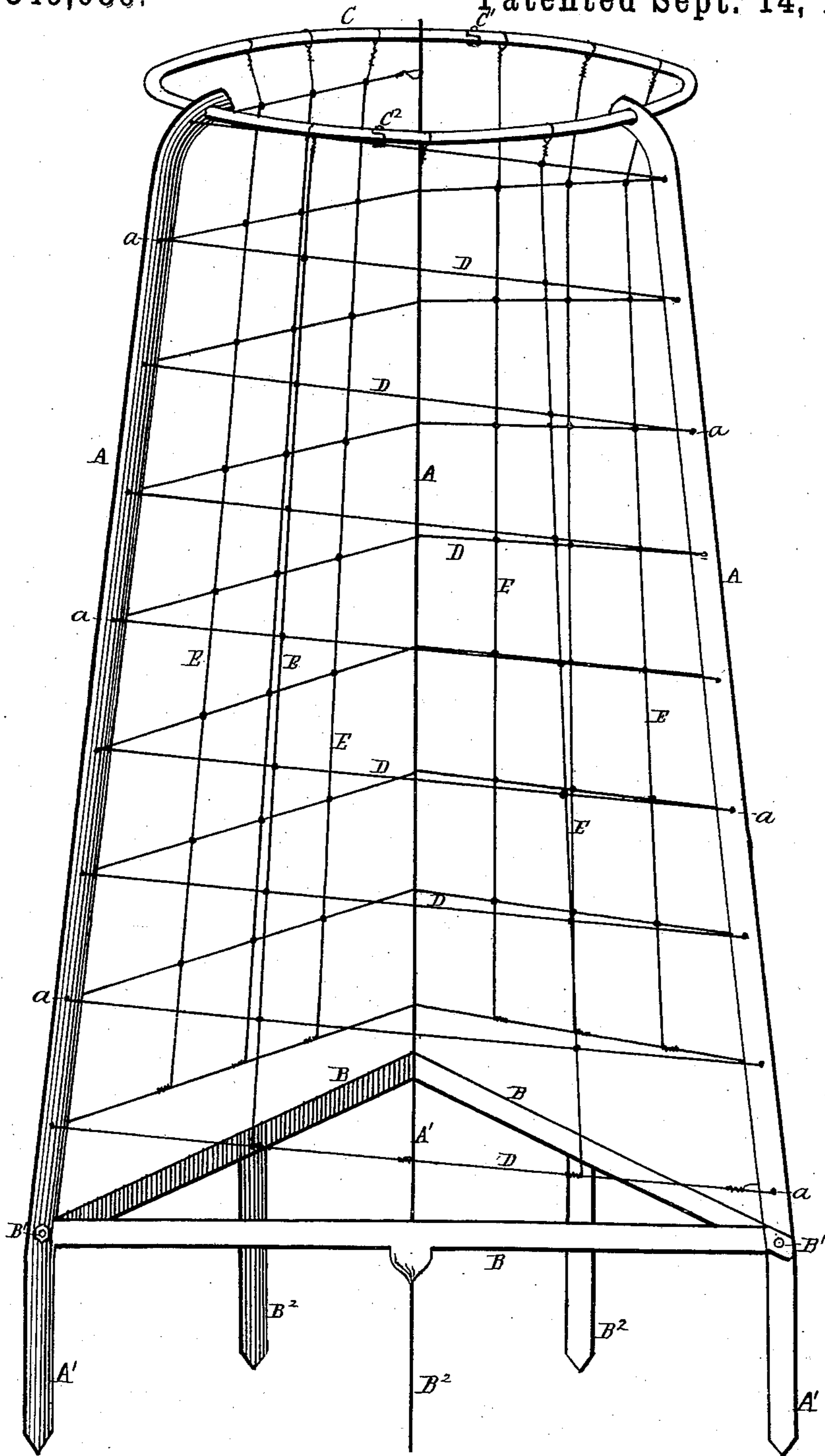
(No Model.)

G. S. COLE.

TREE GUARD.

No. 349,086.

Patented Sept. 14, 1886.



Witnesses:
E. C. Mordman.
W. B. Masson

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by E. E. Masson
atty.

UNITED STATES PATENT OFFICE.

GEORGE SPEARING COLE, OF THE DEAN, NEAR CIRENCESTER, COUNTY OF GLOUCESTER, ENGLAND.

TREE-GUARD.

SPECIFICATION forming part of Letters Patent No. 349,086, dated September 14, 1886.

Application filed January 13, 1886, Serial No. 188,403. (No model.) Patented in England October 9, 1885, No. 11,997; in France December 11, 1885, No. 172,846, and in Belgium December 15, 1885, No. 71,238.

To all whom it may concern:

Be it known that I, GEORGE SPEARING COLE, a subject of Her Majesty the Queen of Great Britain, residing at the Dean, near Cirencester, in the county of Gloucester, England, have invented a new and useful Tree-Guard, (for which I have applied for Letters Patent in Great Britain, No. 11,997, dated October 9, 1885, and for Letters Patent in France and Belgium, the French patent being numbered 172,846, and dated December 11, 1885, and the Belgian patent being numbered 71,238, and dated December 15, 1885,) of which the following is a specification, reference being had to the accompanying drawing.

The object of my invention is the production of a tree-guard combining the greatest amount of strength and durability at the minimum of cost, and which can be readily fixed or removed.

My improved tree-guard consists of an iron frame arranged triangularly or in any other suitable manner around the tree. The said frame is constructed of hurdle-iron or other suitable material, and consists of three or more uprights formed at their lower extremities with spikes for entering the ground and united at their base, or that portion which is just above the level of the ground, by means of horizontal rails or bars, which may also be provided with spikes for entering the earth. The said uprights may be vertical, or may be bent or inclined inward toward the tree. The upper ends of the said uprights may also be bent or turned over inward toward the tree, and they are united by an iron hoop or ring. A stout wire is secured at one end to one of the uprights near its base, and the said wire is strained around the frame through holes formed in the said uprights, the said holes being formed in such positions that the said wire is strained spirally upward from the base to the top of the guard, and that the coils of the said wire are the desired distance apart. Smaller wires are then strained at the desired distance apart from the ring or hoop at the top of the frame to the lowest coil of the stout spiral wire.

The drawing is a perspective view of one of my improved tree-guards of triangular form.

The frame of the said tree-guard is composed of three uprights, A. The lower ends of the said uprights are straight and sharp pointed, forming spikes A', for entering the earth in a vertical direction. The said uprights are united together near the ground by horizontal rails or bars B, which may be bowed or curved or straight, as shown. One end of each rail or bar is welded to each upright, the other end of the said rail or bar being secured to the next upright by a bolt and nut, as shown at B'. The welding of one end of the rails B to the uprights gives stability to the frame; but, if desired, the said rails or bars may be secured at both ends by bolts and nuts. The bars or rails B may also be provided with one or more spikes, B², for entering the earth and adding to the stability of the guard. The uprights A and rails or bars B may be formed of hurdle-iron or other suitable material. The uprights A above the rails or bars B may be inclined more or less inward toward the tree, as shown, or they may be vertical. The portion of each of the said uprights between its upper end and the bars or rails B may be bowed or curved outward, for the purpose of adding to the strength of the said upright; or the said uprights may be straight, as shown in the drawing. The upper ends of the said uprights may be turned or bent over inward toward the tree, as shown; or they may be straight, and they are united by a stout ring or hoop, C, of iron or other suitable material. The said hoop or ring C passes through holes formed in the tops of the uprights A, and may be formed of two semicircular portions united by a hinge or joint, as shown at C', their other ends lapping upon each other and being secured by a pin or other suitable means, as shown at C².

A stout wire, D, is secured to one of the uprights A near the cross-rail B, and is strained spirally upward around the guard by being passed through holes *a*, formed in the said uprights. The said holes are formed in such positions in the uprights A as will insure the upward spiral inclination to the wire D and the desired distance between the coils of the said wire. Other wires, E, which may be smaller than the wire D, are strained from the ring or hoop C at the desired distance apart

to the lowest coil of the wire D, the said wires being turned or wound around each coil of the wire D, thus bracing the whole of the coils of the said wire together and to the upper ring or hoop C. The guard derives its strength from this strained wiring.

If desired, four or more uprights, A, may be used, and they may be fixed or disposed around the tree in any suitable manner. The details of my improved guard may also be modified in various other ways without departing from my invention.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. In a tree-guard, a frame consisting of uprights and frames uniting them at the top and bottom, in combination with a wire spirally coiled from the top frame to the bottom frame and engaging with said uprights, substantially as described.

2. In a tree-guard, a frame consisting of uprights and frames uniting them at the top and bottom, in combination with a wire spirally coiled around and engaging with said uprights, and a series of vertical wires connected to the spirally-coiled wire, substantially as described.

3. In a tree-guard, the combination of a circular frame at the top and a polygonal frame at the bottom, with uprights uniting them, and a wire spirally coiled from the top frame to the bottom frame and connected to said uprights, substantially as described.

4. In a tree-guard, the combination of uprights having their lower end pointed and their upper end perforated, with a hoop passing through the perforated upper ends and a polygonal frame uniting the lower ends of said uprights, substantially as described.

GEORGE SPEARING COLE. [I. S.]

Witnesses:

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ARTHUR ABEL COLE.