

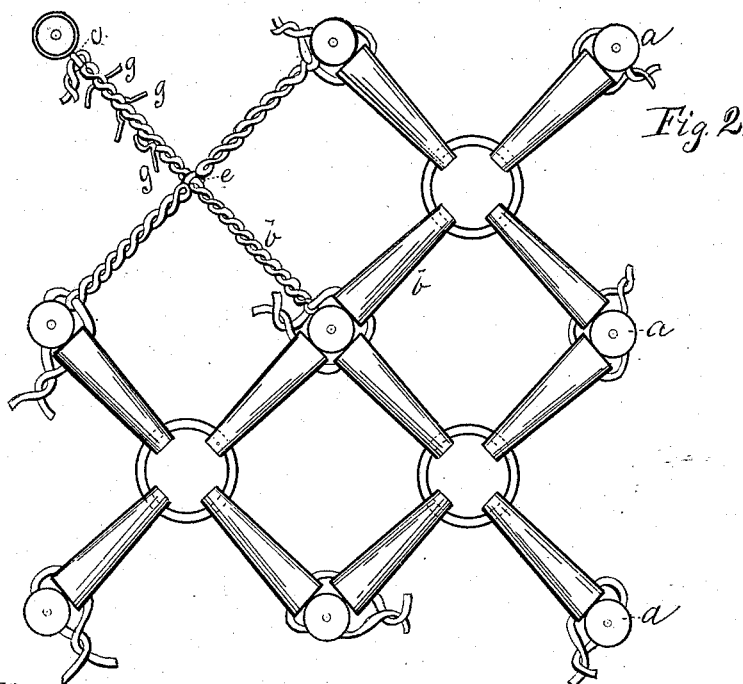
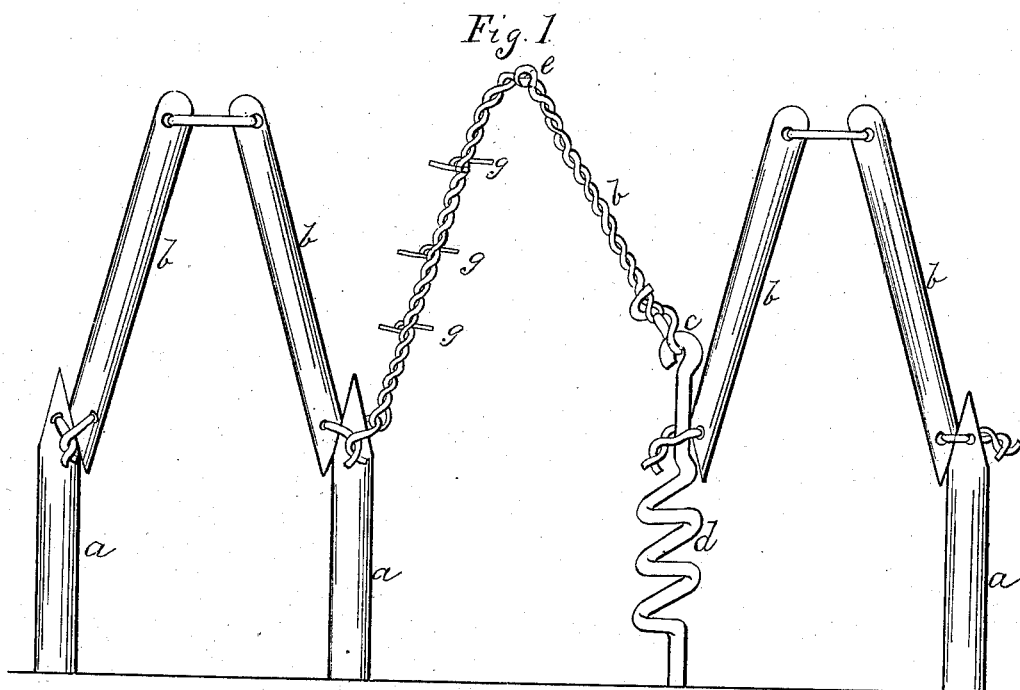
(No Model.)

F. G. PENNELL.

HOP TRELLIS.

No. 261,755.

Patented July 25, 1882.



WITNESSES

Amelia Keyser
Philip Levasi.

INVENTOR

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UNITED STATES PATENT OFFICE.

FRANK G. PENNELL, OF HONEOYE, NEW YORK.

HOP-TRELLIS.

SPECIFICATION forming part of Letters Patent No. 261,755, dated July 25, 1882.

Application filed May 29, 1882. (No model.)

To all whom it may concern:

Be it known that I, FRANK G. PENNELL, a citizen of the United States, resident of Honeoye, in the county of Ontario and State of New York, have invented a new and valuable Improvement in Hop-Trellises; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side view of my device. Fig. 2 is a top or plan view of the same.

This invention has relation to hop-trellises; and it consists in the construction and novel arrangement of parts, as will be hereinafter fully described, and particularly pointed out in the claim.

In the accompanying drawings, the letters *a a* indicate upright stakes arranged in parallel rows, and constituting sets of four. From the four stakes composing a set extend upward obliquely, and to or toward a point over the center of the space between the stakes of the set, the inclined bars or supporters *b b*, the upper and inner ends of which are connected. In this construction it is designed to cover the hop-field with a trellis-work consisting mainly of these stakes and inclined supporters connected in sets of fours, each set consisting of stakes and inclined supporters connected to said stakes and to each other. Except at the outer edges or boundaries of the trellis, each stake will support four inclined supporters, each belonging to a different set and inclined toward the center thereof. The stakes and supporters may be arranged in sets of three or six, if desired; but the arrangement above described will answer every purpose.

The stakes *a* are designed to be reversible, and the inclined rising supporters *b* are connected to these stakes by means of wires, loops, and rings, or other common fastenings, each stake supporting four supporters inclined in different directions, as indicated in the drawings.

The stakes *a* may be made of metal, and in that case should be provided with eyes *c*, to which the ends of the inclined supporters may be connected. The middle part, *d*, of the metal stake should be made in spiral form, in order that the hop may readily become engaged therewith when thrown against the stake.

The supporters *b* may be constructed of wire, several strands twisted together being preferred. These wire supporters may be connected directly to each other at their upper ends; or rings *e* may be used to connect them. When the top rings, *e*, are employed they serve to provide openings through which light and air penetrate into the interior parts of the vines on the trellis-work.

Usually it will be found convenient to use wood in the construction of the reversible stakes and inclined supporters, and the latter can be connected to the stakes and to the rings *e*, or to each other, in a manner similar to that above indicated with reference to the metal stakes and supporters.

Every two years the stakes should be reversed in order to prevent the ends in the ground from becoming injured by long-continued exposure to dampness.

When wire supporters *b* are employed they should be provided with short transverse branches or arms *g*, whereby the vines can obtain purchase in climbing.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

In a hop-trellis, the reversible stakes *a*, obliquely rising supporters *b*, connected by their lower ends thereto, and the rings *e*, connecting the upper ends of each set of supporters, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

FRANK G. PENNELL.

Witnesses:

A. J. GILBERT,
P. J. STOUT.