

(No Model.)

A. B. WOOD.

TENT.

No. 399,640.

Patented Mar. 12, 1889.

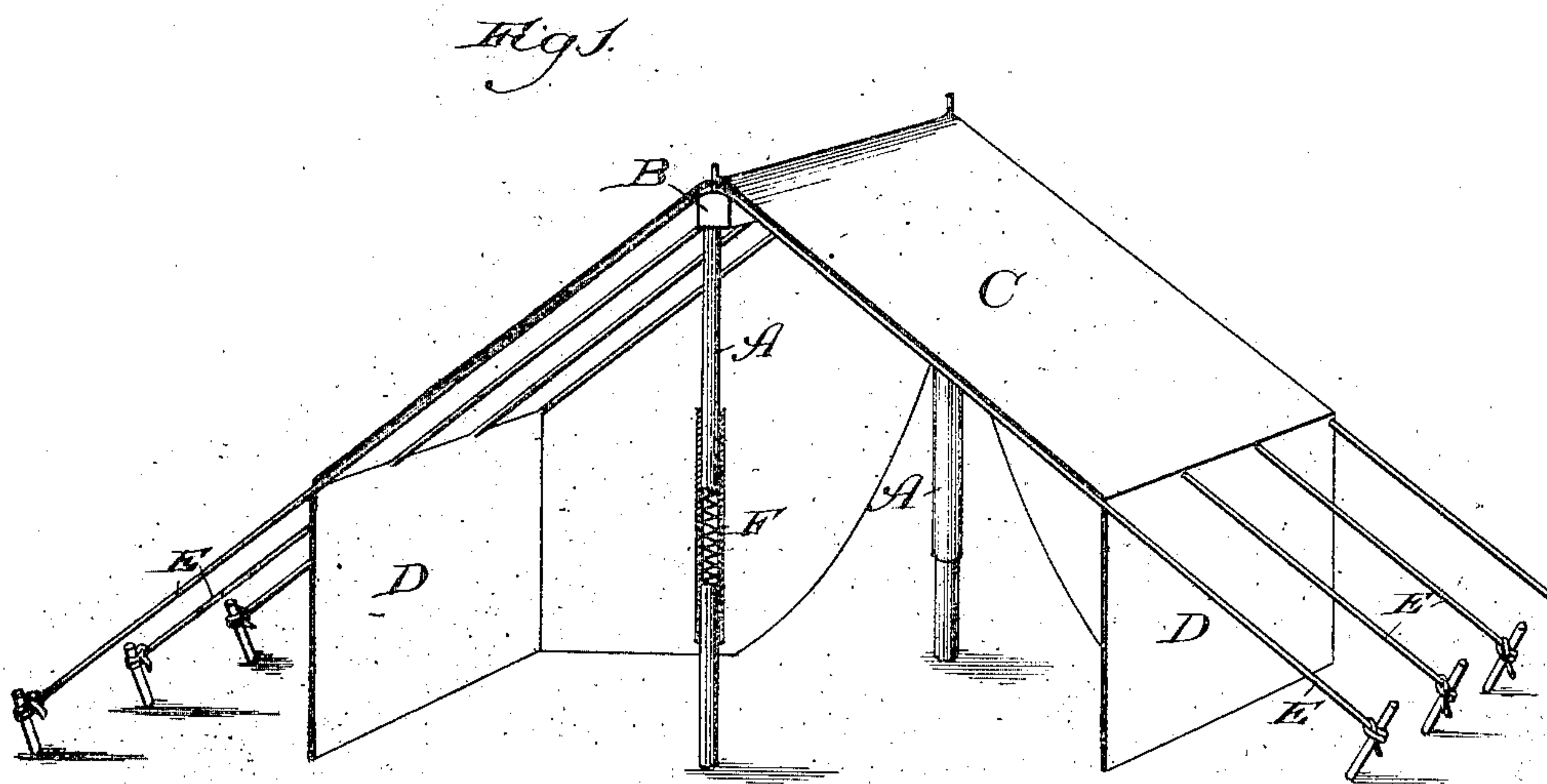


Fig. 2.

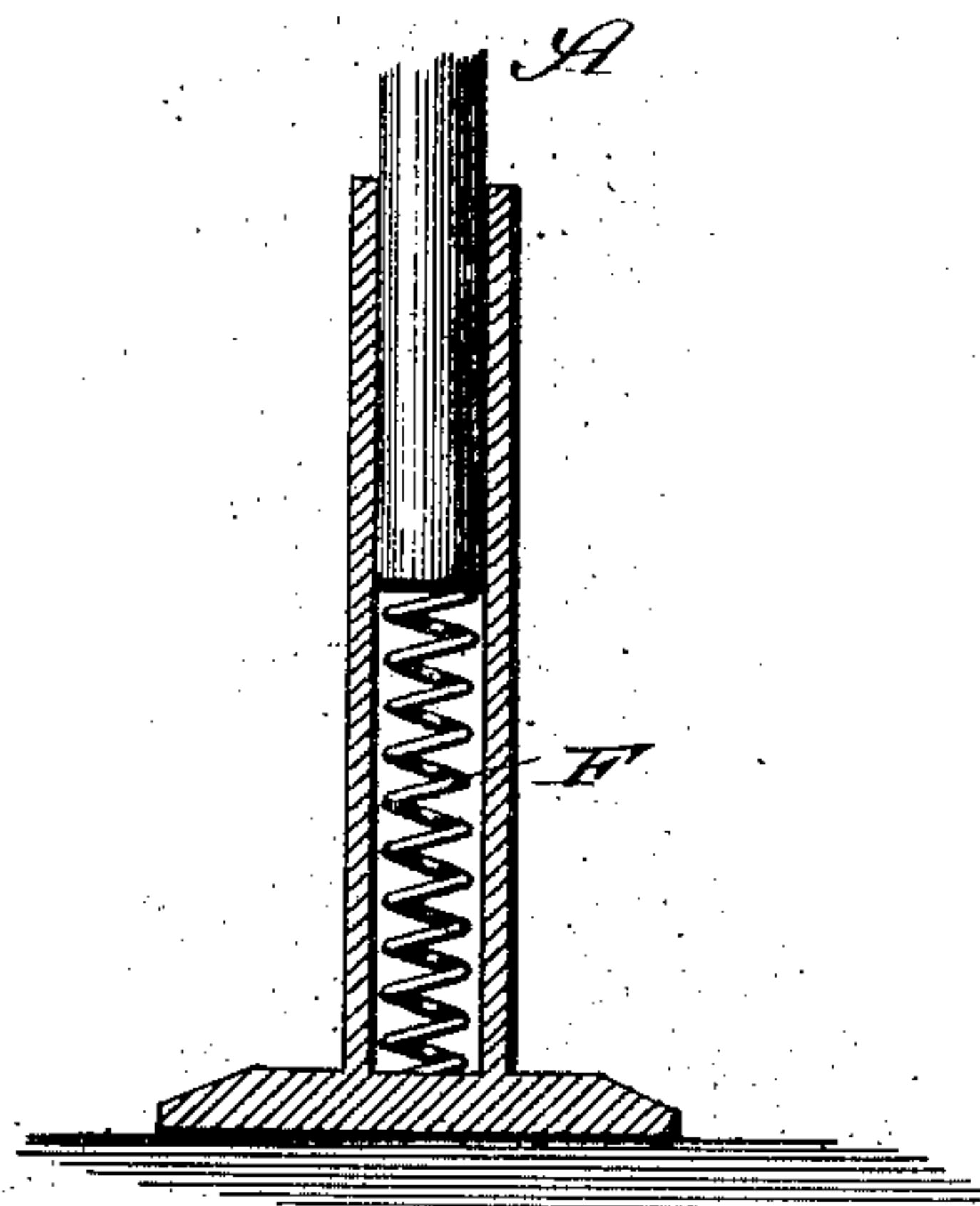


Fig. 3.

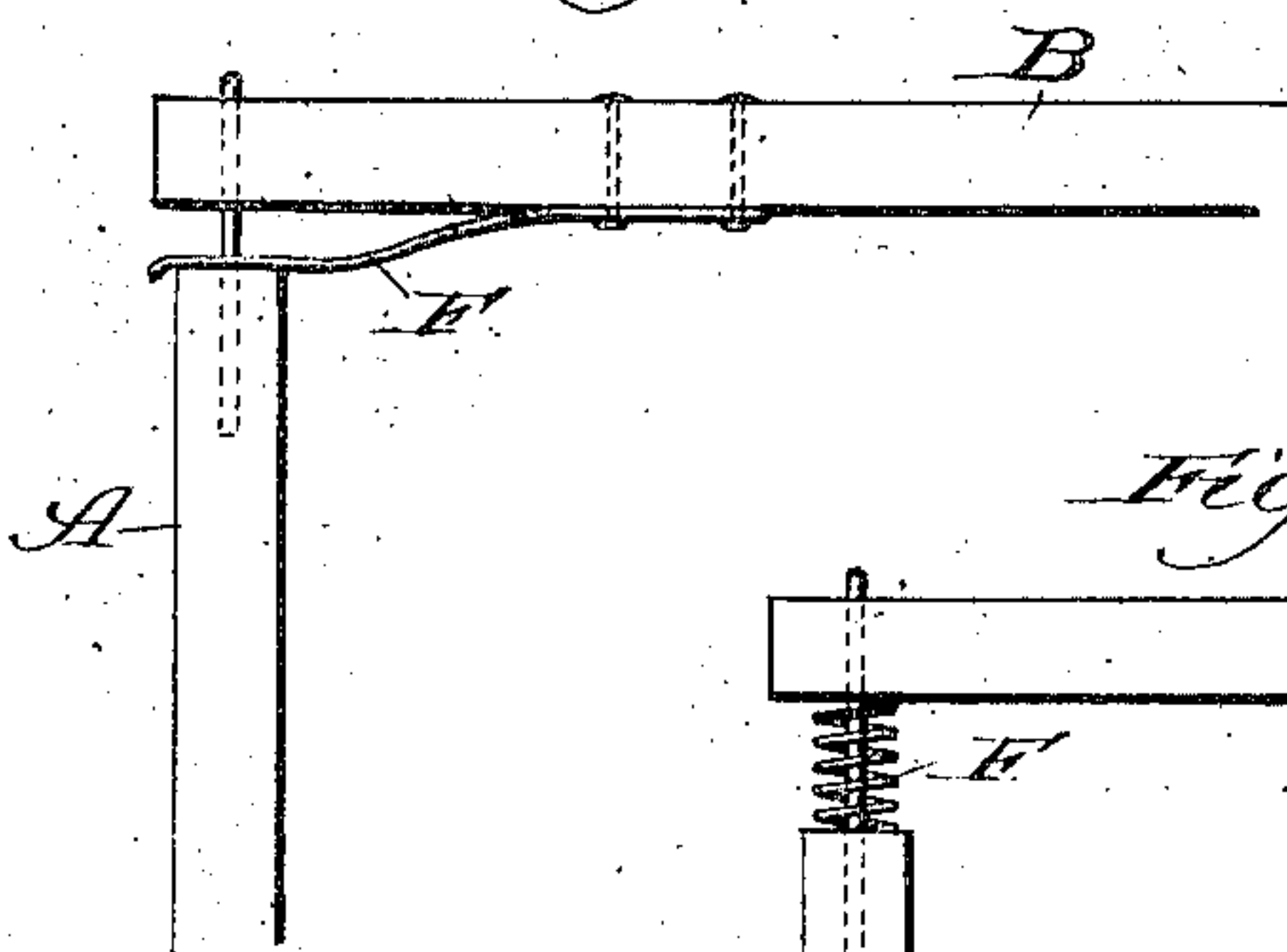


Fig. 4.

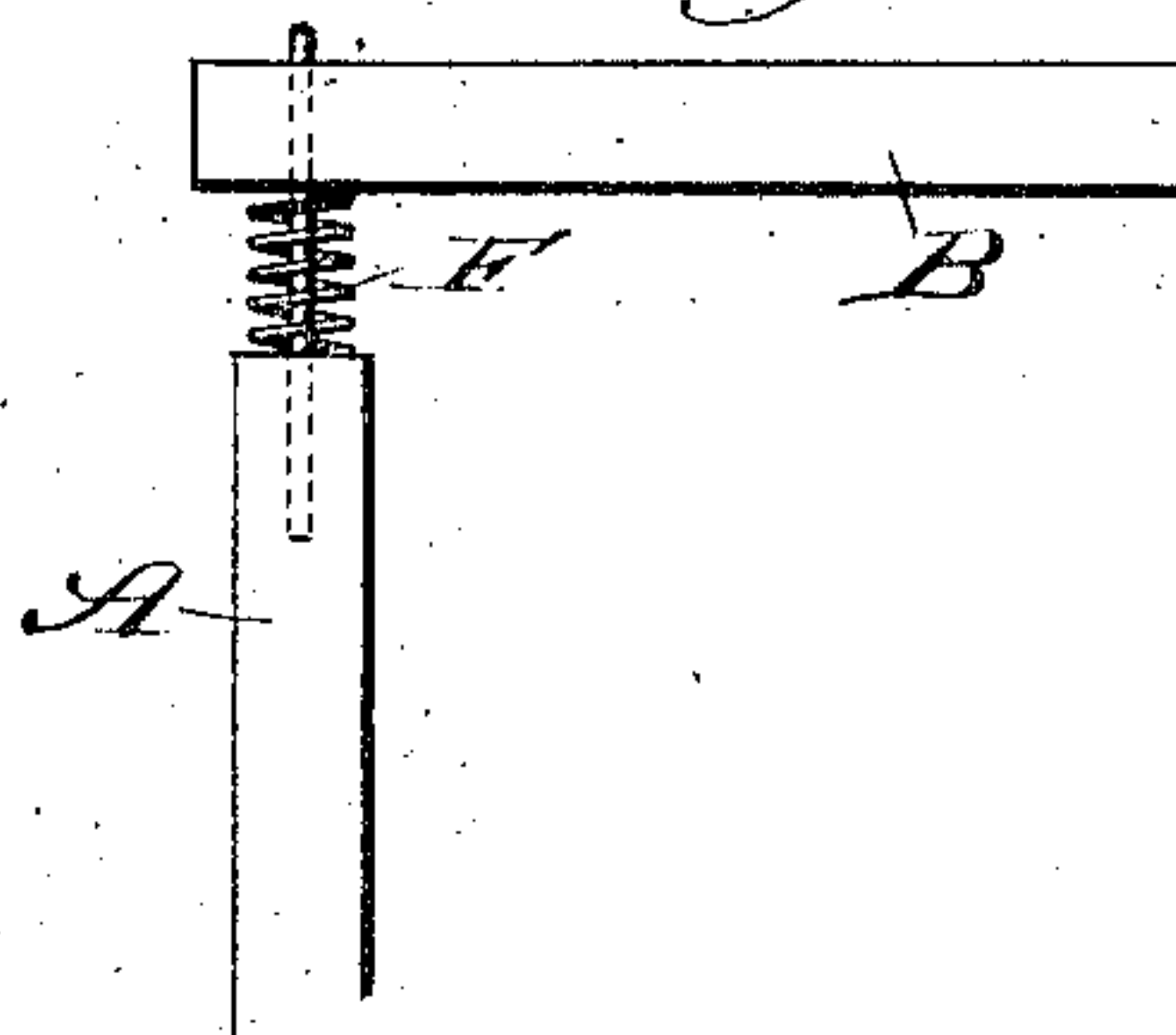


Fig. 5.



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UNITED STATES PATENT OFFICE.

ALVINUS B. WOOD, OF ANN ARBOR, MICHIGAN.

TENT.

SPECIFICATION forming part of Letters Patent No. 399,640, dated March 12, 1889.

Application filed June 1, 1888. Serial No. 275,774. (No model.)

To all whom it may concern:

Be it known that I, ALVINUS B. WOOD, a citizen of the United States, residing at Ann Arbor, Michigan, have invented certain new and useful Improvements in Tents, of which the following is a specification.

The object of my invention or improvement is to make a tent that will automatically conform to the changes in the weather and maintain a taut and stretched condition whether the season be wet or dry; and my invention consists in the features and details of construction hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of a tent, showing the arrangement of the upright supporting parts, the ridge-pole, the canvas, the flaps, the guy-ropes, and other parts. Fig. 2 is an enlarged view of one of the upright posts; Fig. 3, a side view of one end of the ridge-pole and a portion of one of the upright posts; Fig. 4, a modified view of the same, and Fig. 5 a portion of one of the guy-ropes with a spring inserted.

A is the upright posts; B, the ridge-pole; C, the tent-canvas; D, the flaps of the tent; E, the guy-ropes, and F the spring.

Heretofore one great inconvenience in the use of tents has been that the canvas and guy-ropes have contracted and expanded with changes in the weather from wet to dry. In dry weather they have expanded, and the other parts of the tent have been flappy and noisy on windy days, or baggy and unsightly on calm days, and in wet weather the canvas and ropes have contracted and drawn the parts up until the edges were off the ground or the tent-stakes loosened or drawn entirely out, so that the tent would collapse. This has necessitated frequent changes in the length of the guy-ropes to tighten them in dry weather and to loosen them in wet weather, and has frequently required the occupant to go outside in the midst of a driving rain or storm to lengthen the guy-ropes. In my invention all these inconveniences and objections are obviated, and the tent made self-adjusting to meet the changing conditions of the weather. I secure this automatic self-adjustability of the tent by arranging a spring in some of the supporting parts to expand or contract, according to its location, to compen-

sate for the variations in length of the guy-ropes and canvas in wet or dry weather. This spring may be of any kind desired, whether coiled or flat, or metal or rubber, so long as it is of a size and strength to answer the purpose. I have shown more than one kind of spring and arranged in more than one way.

In Fig. 1 I have shown a coiled spring located in the main upright posts about the middle. In this case the posts are divided into two parts and the spring inclosed in a barrel or case, into which the divided portions of the posts are inserted and held in proper position, but still loosely enough to permit the one part of the posts to freely move up and down as the spring is contracted or expanded.

In Fig. 2 I have shown the spring as coiled and located in a barrel or case, in which the lower end of the post is inserted, so that it can be moved up or down against or with the spring.

In Fig. 3 I have shown the spring as flat and located at the top of the upright posts.

In Fig. 4 I have shown the spring as coiled and located at the top of the upright posts.

In Fig. 5 I have shown the spring as coiled and inserted in the guy-ropes to form a section of the same.

In all these cases, and in others which might be mentioned, the action of the spring is the same and makes the tent self-adjustable to the variations of the weather. In the first four figures the contraction of the canvas and guy-ropes exerts a force downward and causes the supports of the tents to fall or become lower, and the expansion of the canvas and guy-ropes causes the supports to rise or become higher. The amount or degree of contraction is of course commensurate with the amount of contraction in the ropes and so fully compensates it. In the last figure the spring is arranged as a section of the guy-ropes and expands enough to compensate for the contraction in the ropes. In this way the force of the contraction is exerted on the springs in the supports, instead of on the stakes, which, it is to be understood, will yield at a less power than that required to draw the stakes from the ground. As the weather becomes dry the canvas and guy-ropes gradually

ally lengthen out to their normal condition, and as they lengthen the springs will raise the ridge-pole, or, if located in the guy-ropes; shorten the length of the ropes, so that the
5 parts of the tent are constantly kept stretched and taut.

It will of course be understood that the strength of the springs, however made or applied, is to be proportioned or adapted to the
10 size and weight of the tent in connection with which they are to be used. This is a matter that can easily be determined by the manufacturer and need not be enlarged upon; nor is the kind of tent, whether wall, round, or
15 "A" tents, in connection with which my invention is to be used, material, as it is adapted and intended for all tents.

What I regard as new, and desire to secure by Letters Patent, is—

1. In a tent, the combination of a canvas 20 and its supporting-post provided with a spring which permits the post to lengthen or shorten as the canvas contracts or expands, substantially as described.

2. In a tent, the combination of a ridge- 25 pole, upright posts supporting the same, and springs placed in or upon such posts, whereby the ridge-pole is raised or lowered as the tent-canvas expands or contracts, substantially as described.

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Witnesses:

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