(No Model.)

W. R. HAMILTON.

TENT.

No. 379,274. Patented Mar. 13, 1888.

Fig. 1.

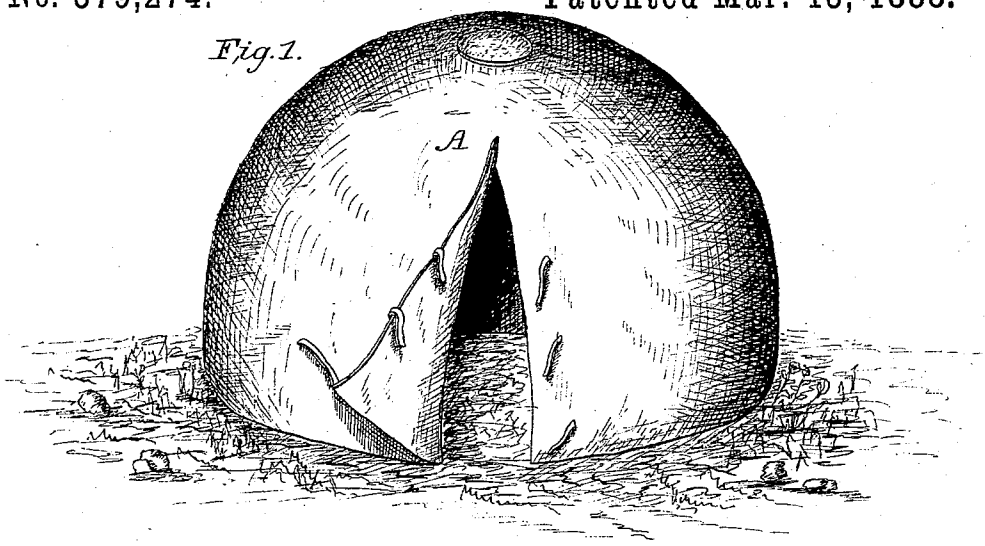


Fig. 2.

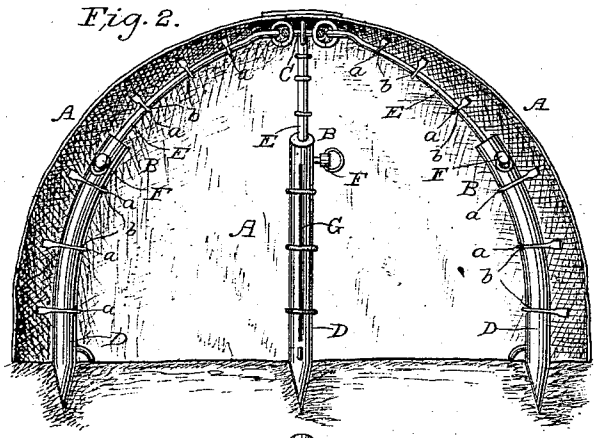


Fig. 3.

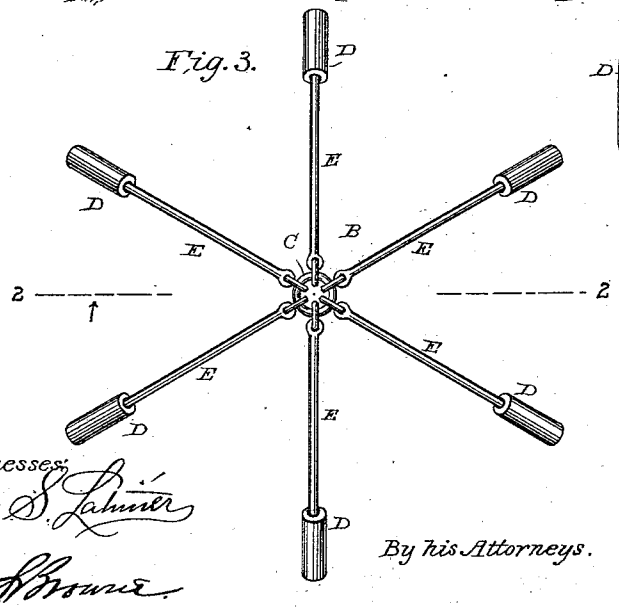


Fig. 4.

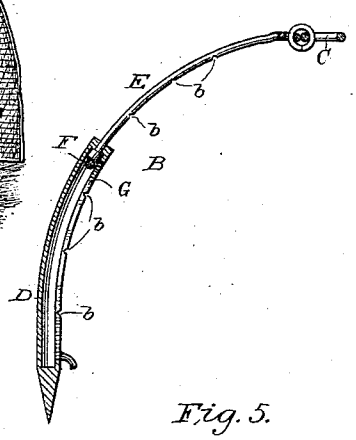
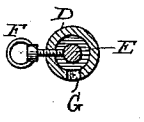


Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM R. HAMILTON, OF THE UNITED STATES ARMY.

TENT.

SPECIFICATION forming part of Letters Patent No. 379,274, dated March 13, 1888.

Application filed October 25, 1887. Serial No. 253,349. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. HAMILTON, of the United States Army, have invented certain new and useful Improvements in Tents, of which the following is a specification.

The object of this invention is to produce a tent mainly for military purposes which shall, with a minimum bulk and weight of canvas and other fixtures, cover the largest possible and most effective area, present the least resistance to wind, be easily and quickly erected and taken down for transportation, and be the most economically transported. With these main ends in view I construct the tent so that when erected it shall be substantially a hollow hemisphere with its greatest diameter resting on the ground. A tent having this hemispherical shape possesses great advantages over the "wall" tent which is now in general use, and over tents of conical and other shapes which have been previously suggested; while the same area of canvas in a hemispherical tent will cover nearly twice the ground area as the same area of canvas in a wall tent, and at the same time, owing to the curvature of the sides, a larger percentage of the ground can be effectively used. The main advantage of thus covering a greater ground area with the same area of canvas lies not so much in the economy of the material employed as in the greatly-decreased bulk and weight to be transported. Such a tent offers the minimum resistance to the wind, rendering it easy to keep it in position during wind-storms which would tear down the ordinary tents.

The construction and mechanism for supporting the improved tent are shown in the accompanying drawings, in which—

Figure 1 is an exterior view of the tent. Fig. 2 is a central vertical section of the same. Fig. 3 is a plan view of the frame-work of the tent, and Figs. 4 and 5 are detail views of one of the supporting-bows.

The tent is composed of a canvas covering, A, suitably made, so that when in position on the supporting frame-work it forms a hollow hemisphere. The supporting frame-work over which the covering is stretched is composed, mainly, of a series of quadrantal curved bows, B B, each of which extends through ninety degrees approximately of an arc of a circle, which arc determines the sphericity of the tent. Each of these bows, which are preferably of metal, is pointed at its lower end, so as to be thrust into the earth far enough so as to render the tent firm and stable. The several bows are pivotally connected in any suitable manner—say by a ring-joint—at their upper ends to a single small metallic apex-ring, C. A suitable size for this apex-ring would be six inches in diameter for a tent having bows thirteen feet and three inches long. This length of bows makes a tent eight and a half feet high, which is the regulation height of tents in the United States Army. Any suitable number of bows may be employed; but six is a sufficient number for the size of tent indicated. In setting up the tent the bows will be arranged at equal distances to cover the entire circle of the area inclosed. Thus arranged, with the lower ends of the bows thrust a few inches in the ground, the several bows brace each other and a firm and stable frame-work is formed for the canvas.

While the bows may each be a single piece of metal, they are preferably made in sections, since, if each is a single piece, they would be awkward to pack. Each bow is therefore, in the preferred construction, made in two sections, D E. The lower section, D, is preferably a tube, while the upper section, E, is a rod which slides in the tube. When the sections are drawn out to their full extent, the will be of its proper length, but when the rod is pushed down inside of the tube the length will be reduced one-half. The rod is held in any position relatively to the tube by means of a set-screw, F, tapped through the tube and bearing against the rod. On its under side the tube is formed with a longitudinal slit, G. This slit does not weaken the tube materially, it being when so cut strong enough for all purposes, but it renders the bow lighter and prevents the lodgment of dirt and other matter in the tube. When placed over the frame-work thus formed, the canvas is secured thereto by strings or tapes *a a*, stitched to the canvas, which are tied around the bows. The bows are formed with notches *b b* on their under sides, in which the strings *a a* are held, so that the canvas cannot be displaced on the frame-work. The frame-work thus formed weighs less than the ridge-pole, uprights, tent-pins, and cords of the usual wall tent.

The sectional construction of the bows is also of material assistance in taking the tent down. After the tapes are untied, the set-screws are unloosened, and the rods then slide into the tubes. The canvas can then be easily lifted off.

I claim as my invention—

1. In a hemispherical tent, a frame composed of an apex-ring and a series of metallic bows pivotally connected thereto, each of said bows being substantially the quadrant of a circle, in combination with a canvas covering which fits over said bows, and which, when fitted thereon, is of hemispherical shape, substantially as set forth.

2. In a hemispherical tent, a frame-work composed of a series of metallic bows, each of said bows being substantially the quadrant of a circle, and each bow being made of at least two sections, whereby it may be packed in a small space, in combination with a canvas covering which fits over said bows, and which, when fitted thereon, is of hemispherical shape, substantially as set forth.

3. In a hemispherical tent, a frame-work composed of sectional quadrantal metallic bows, each bow being composed of a tubular curved section and a curved rod which slides in and out of said tubular section, in combination with the canvas covering of hemispherical shape when fitted on said bows, substantially as set forth.

4. In a hemispherical tent, a frame-work composed of sectional quadrantal metallic bows, each bow being composed of a curved tube having a slit on one side, and a curved rod which slides in said tube, in combination with the canvas covering of hemispherical shape when fitted on said bows, substantially as set forth.

5. In a hemispherical tent, the frame-work composed of an apex-ring and quadrantal bows pivotally connected therewith, each bow being composed of a tube and a rod sliding therein, and said bows being suitably notched, in combination with a canvas covering which fits over said frame-work, said covering being provided with tapes which are tied around the bows in their notches, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

W. R. HAMILTON.

Witnesses:
F. T. WILSON,
A. S. BROWNE.