

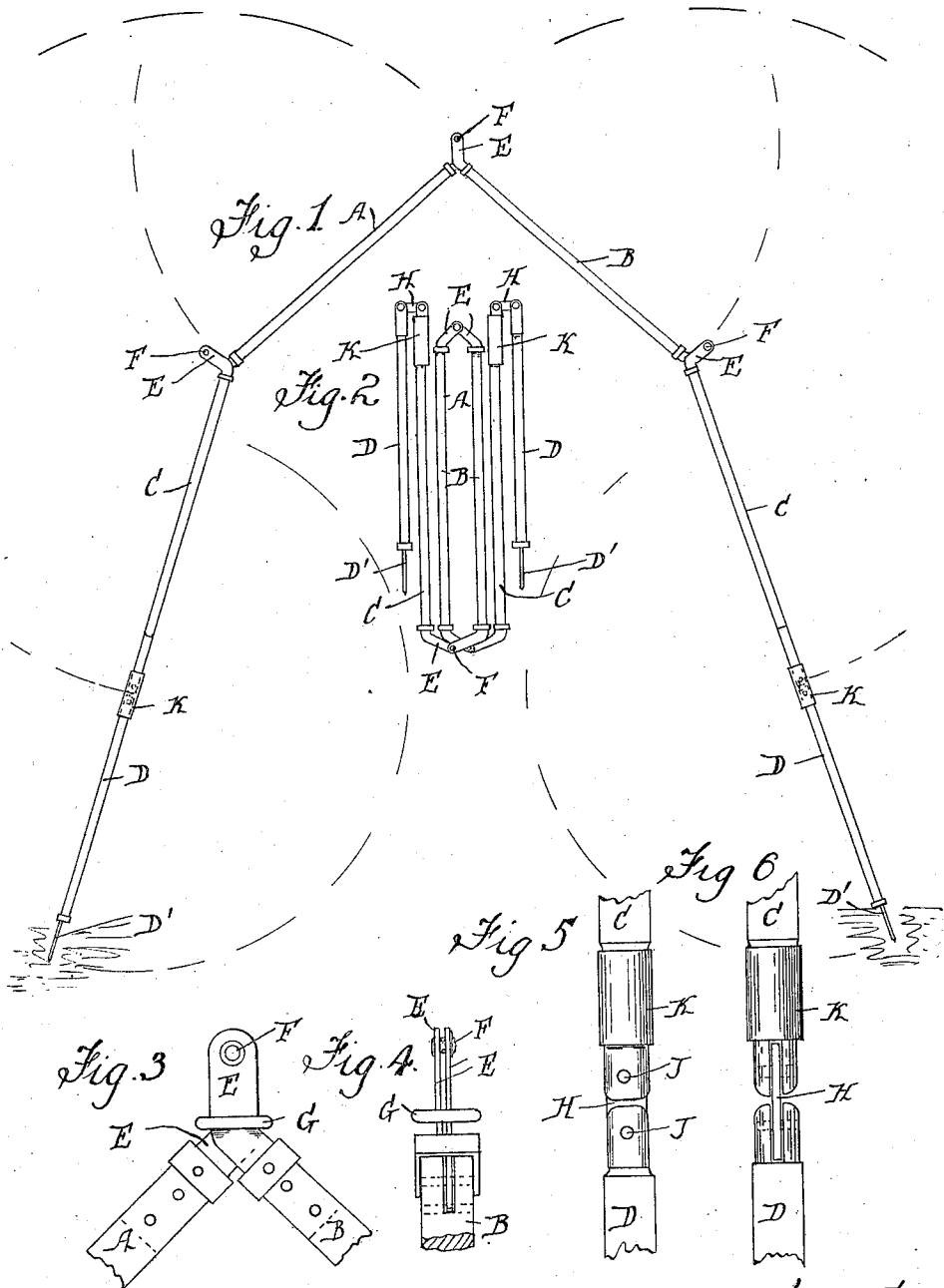
Aug. 12, 1924.

H. P. HANSEN

1,504,889

TENT

Filed July 11, 1922



Inventor:
Hans Peter Hansen
By Arthur S. [Signature]
att.

UNITED STATES PATENT OFFICE.

HANS PETER HANSEN, OF GISBORNE, NEW ZEALAND.

TENT.

Application filed July 11, 1922. Serial No. 574,180.

To all whom it may concern:

Be it known that I, HANS PETER HANSEN, subject of the King of Great Britain, residing at Peel Street, Gisborne, in the Dominion of New Zealand, have invented new and useful Improvements in or Relating to Tents, of which the following is a specification.

My invention has been devised in order to provide an improved construction of collapsible or folding frame for tents. This construction is such that the frame for the full tent is made up of a number of separate members each formed of a number of sections hinge-jointed together in such a manner that they may be folded into the compass of a single section, or may be unfolded to form a frame of the cross sectional shape of the tent to be erected.

The frame member has its sections so hinge-jointed together that they will be locked rigidly in the unfolded or assembled positions and thereby to form a strong and rigid support for the canvas covering of the tent.

The formation of the tent frame of these members, each capable of being folded or collapsed into small compass, will provide for the easy portability of a frame and its cover, as the whole may be packed into a small bundle that may be carried in a vehicle as ordinary luggage. The provision of such a frame also will save the necessity of cutting trees or saplings to provide a frame for use in the erection of a tent, an operation that cannot always be conveniently carried out when travelling on a camping trip.

The invention consists in a special construction of frame member made up of a number of separate sectional lengths hinge-jointed together so that the lengths may be relatively positioned, to enclose between them and the ground's surface, an area corresponding to the cross sectional shape of tent that is desired, such hinges being so formed as to lock the lengths in their proper relative positions, when turned thereto, against any collapsing of the frame, inward with the weight of the tent cover.

Such a construction of frame member is illustrated in the accompanying drawings, in which:—

Figure 1 is an elevation of the frame member in the extended position ready for use.

Figure 2 is an elevation thereof, folded up.

Figures 3 and 4 are respectively front and

side elevations, on an enlarged scale, of the hinge joints used for connecting certain of the sectional lengths together.

Figures 5 and 6 are respectively similar views of the joints for connecting other lengths together.

In the example shown, the frame member is so made as to form a tent of cross sectional shape having a peak roof and side walls inclining outward toward their bottom ends. Such member therefore is formed of six sectional lengths, two of which, A and B, are used to form the peak roof portion, and two, C and D, on each side, to form the wall portion for that side. These several lengths are made of any approved material, such as wood battens bound with metal ferrules wherever needed to strengthen their ends from splitting, or of lengths of metal rod, or piping or the like. They are also made all of approximately the same length.

The two lengths A and B are hinge-jointed together at their inner ends, and the other or outer ends thereof are respectively hinge-jointed to the upper ends of the lengths C on the corresponding sides, by means of the form of hinge shown in Figures 3 and 4 of the drawings. This consists in attaching a hinge plate E to project beyond each end to be joined and bending it sideways at an angle to the plane of the section's length and overlapping it with the similar plate on the other length and then connecting them by a pivot pin F passed through their outer ends. The angles at which the two plates E are bent are such that the two sections may turn freely in one direction until they extend lengthwise with each other, but when turned in the other direction will engage and lock when they assume the angle it is required they shall assume in the formation of the frame and then be held rigidly against collapsing further in this direction. In this position the two plates are coincident with each other, as shown in Figure 1 so that any possibility of the hinge turning by pressure from within may be prevented by providing a ring G (Figures 3 and 4) and slipping it down over the plates. These rings G may then be employed for the attachment to the frame of the tent cover or of guy ropes for holding the frame in the erected position.

When the sectional lengths are made of metal, the hinge plates E may be formed integrally therewith instead of separate pieces secured thereon.

The manner of hinge-jointing the length C on each side, with the length D, is such as to allow of the two lengths extending continuously in the same plane and of being
 5 locked as a rigid stay, or of being unlocked and for the length D being swung in on to the length C. This is effected by splitting the adjacent ends of the two lengths and inserting a hinge link H within the splits so
 10 as to extend across the joint and then pivoting the link within the two ends by cross pivot pins J. The adjacent portions of the two ends are rounded and a metal sleeve K is fitted round the member C so as to be
 15 capable of sliding up on its rounded end to occupy a position above the hinge, as shown in Figures 5 and 6, or down to overlap such end and to fit over the rounded adjacent end of the length D, as shown in Figure 1. In
 20 this latter position therefore, the sleeve will hold the two lengths so that they extend rigidly as one length, while in the former position the hinge will be released so that the one length may fold on the other in the
 25 required manner. When the sectional lengths are made of wood, the rounded ends of C and D will preferably be inserted in metal ferrules on which the sleeve K will slide, thereby obviating any liability of the
 30 wood swelling with damp and jamming the sleeve in its action.

In collapsing the frame, the lengths D are turned in and up on the respective lengths C and the two lengths C and D then swung
 35 out and over on to the adjacent length A or B, and finally the lengths A and B are doubled up and over on their connecting hinge so that the whole of the sections will be folded together into the length of a single
 40 section in the manner shown in Figure 2.

The bottom end of each section D is furnished with a peg extension D' that will be driven into the ground to aid in holding the frame in its erected vertical position.

Any desired number of these frames may
 45 be used for supporting a tent cover of ordinary textile material shaped to correspond with the frames, such cover being attached to the frames in any of the well known
 50 methods, as for instance by means of thimble rings secured to the cover edges and threaded over the pegs formed by the hinges E and by being threaded up the lengths of the legs of the frame formed by the lengths C and
 55 D. The top ends of the several frames are connected together by a guy rope extending between them and drawn taut by the guying of the end frames so that altogether a strong and rigid framing for the tent is provided.

I claim:—

60 Collapsible frame for tents, comprising a plurality of separate members, each composed of a plurality of hinge-jointed sectional lengths adapted to form respectively
 65 the peak roof portion and the side-wall portion, hinge plates each adapted to project beyond each end to be joined together and bent sideways at an angle to the plane of
 70 the section's length and overlapping with the hinge plate on the other length, a pivot pin passing through the outer ends of the overlapping hinge-plates, the said hinge
 75 plates coinciding with each other in the assembled position of the said frame members, and a ring adapted to be slipped over the said hinge plates to hold them in locked position.

In testimony whereof I affix my signature.

HANS PETER HANSEN.