H. PAUL.

TENT.

APPLICATION FILED JULY 5, 1910.

992,383.

Patented May 16, 1911.

2 SHEETS—SHEET 1.

FIG. 1

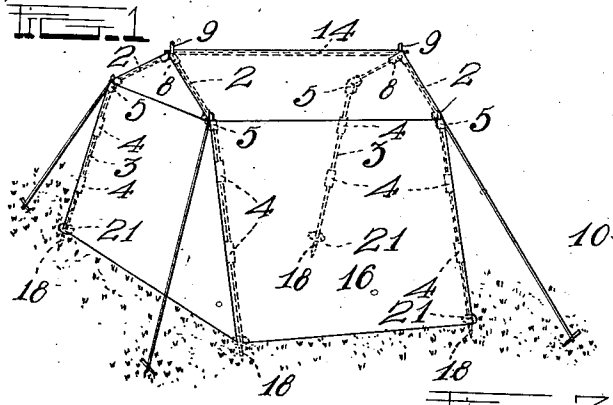


FIG. 11

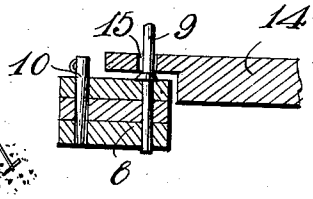


FIG. 3

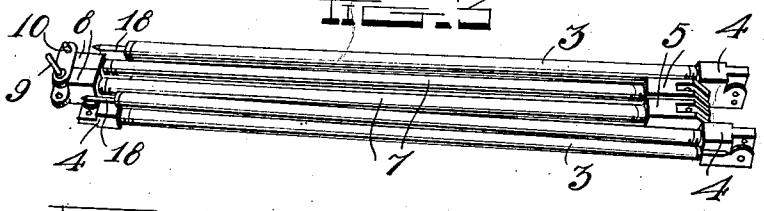


FIG. 12

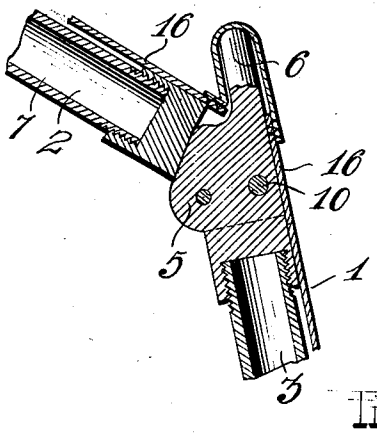


FIG. 13

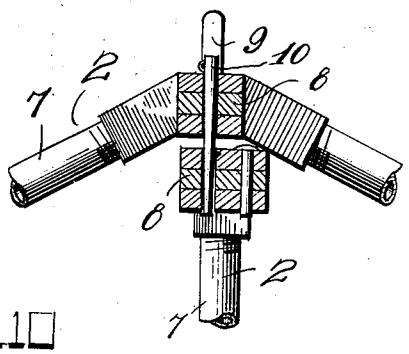
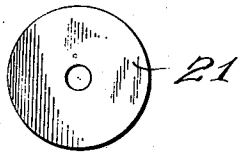


FIG. 10



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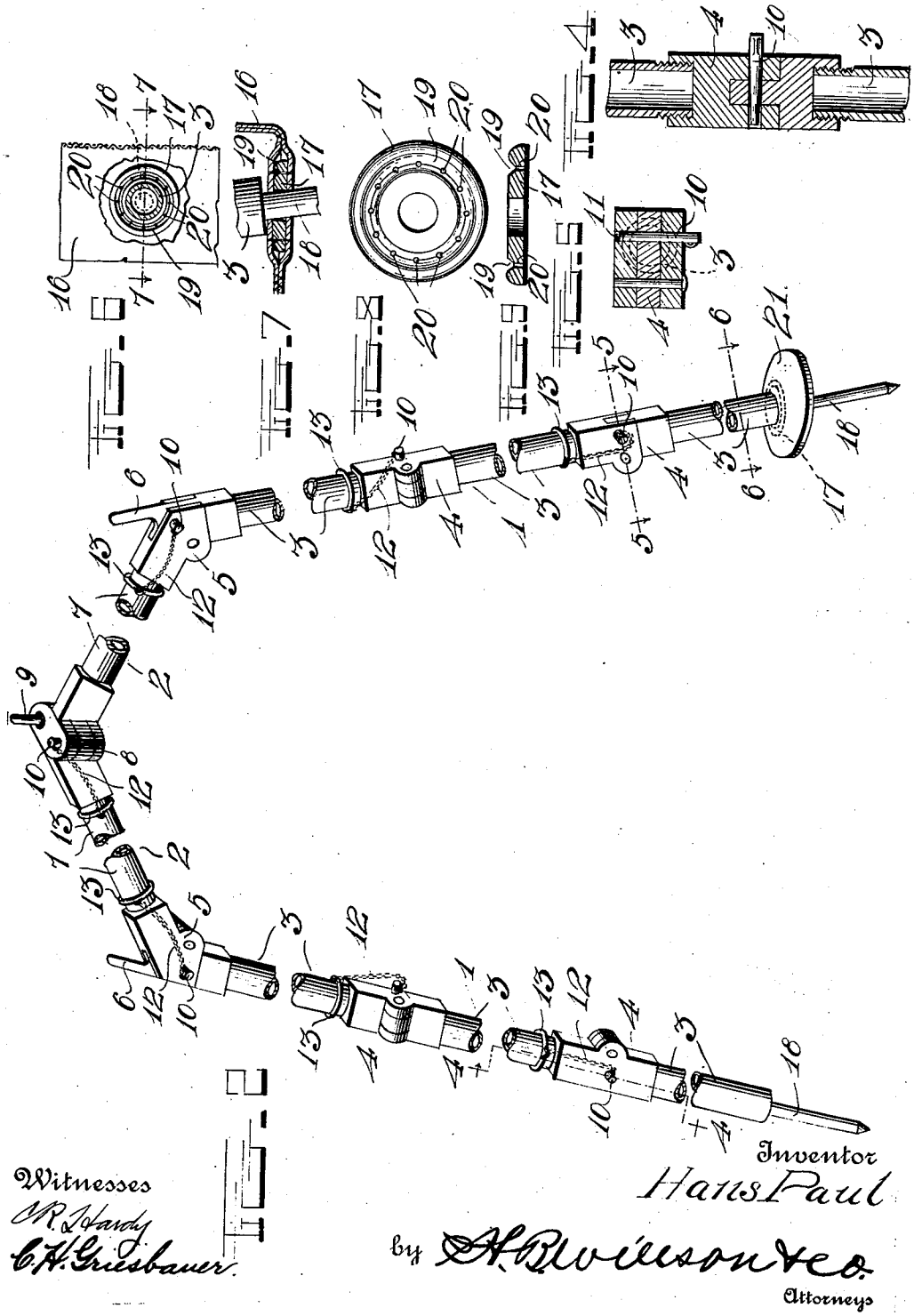
2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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TENT.

992,383. Specification of Letters Patent. Patented May 16, 1911.

Application filed July 5, 1910. Serial No. 570,433.

To all whom it may concern:

Be it known that I, HANS PAUL, a citizen of the United States, residing at Belleville, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Tents; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in tents.

One object of the invention is to provide a jointed frame adapted to be folded into compact form for shipping or storing.

Another object is to provide a tent frame of this character which will be simple, strong and durable in construction, light in weight and which may be arranged in various forms to support different styles of tents.

With these and other objects in view the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings: Figure 1 is a perspective view of a tent having a frame constructed in accordance with my invention; Fig. 2 is an enlarged perspective view of one of the end sections of the frame opened out for use, parts being broken away; Fig. 3 is a similar view of an end section with the parts in folded position; Fig. 4 is a vertical sectional view through two sections of one of the side or leg members of the frame ends on the line 4—4 of Fig. 2; Fig. 5 is a horizontal sectional view of the same on the line 5—5 of Fig. 2; Fig. 6 is a horizontal sectional view through a portion of the lower edge of one side of the tent and through the leg member of the same on the line 6—6 of Fig. 2 showing the manner in which the side of the tent is stretched and fastened down; Fig. 7 is a vertical sectional view on the line 7—7 of Fig. 6; Fig. 8 is an enlarged plan view of one of the metal reinforcing washers through which the ground engaging pins are inserted to hold down the sides of the tent; Fig. 9 is a central vertical cross section of the same; Fig. 10 is a plan view of one of the stop plates to prevent the leg members of the frame ends from being forced too far into the ground; Fig. 11 is a detail sectional view through one end of the ridge pole and the adjacent portion of the arch member of the frame; Fig. 12 is an enlarged detail sectional view through one of the upper corners of the tent covering at one end of the tent showing the construction of the pocket on said corner to receive the pins on the upper joints of the frame the latter being shown in side view with the pin in engagement with the pocket; Fig. 13 is a fragmentary view of the two ends of the frame showing the manner in which the arch members are arranged and connected together for forming a square tent.

In the embodiment of my invention I provide a supporting frame which may be constructed and arranged to form a support for any style of tent and in the present instance said frame is constructed and arranged to form an arched or wall tent wherein the frame comprises end sections 1 which are connected together by a ridge pole as shown.

Each of the end sections of the frame herein shown comprises side or leg members 1 which are connected together at their upper ends by jointed arch members 2. The side or leg members 1 consist of a series of hingedly connected sections 3 which may be constructed of any suitable material but are preferably in the form of cylindrical tubes or pipes the opposite ends of which are soldered, brazed, screwed, riveted or otherwise secured to the engaging members of hinge joints 4. The sections 3 may be of any suitable length and the joints 4 of any suitable construction said joints being here shown and are preferably constructed in the form of rule joints. The joints at the opposite ends of each section are arranged to open and close at right angles to each other so that the sections 3 will fold together at one end in one direction and at their opposite ends will fold in a plane at right angles to the fold at the other end.

The hinge connections 5 between the upper ends of the side or leg members of the frame and the arch or top members is arranged to permit the top or arch member to fold down upon the side members. The leg members of the hinge connections 5 have formed on their upper ends upwardly extending pins 6 the purpose of which will be hereinafter described. The arch or roof member 2 is constructed of two sections 7 similar to the sections 3 of the side members

1, said sections 7 being hingedly connected together by a joint 8 which permits the sections to be folded together when the member is folded downwardly into engagement with the leg members. The hinge pin 9 of the joint 8 extends a considerable distance above the upper side of the joint for a purpose hereinafter described.

The various joints or hinge connections between the sections of the side and arch or top members of the frame are provided with locking pins 10 which are adapted to be inserted through apertures 11 in the hingedly connected members of the joints thus locking or fastening said joints in an open position. The apertures 11 in the hinge members are arranged to register when said members are in open position and the pins 10 which engage said alining or registering apertures are preferably tapered thus enabling the pins to compensate for any wear which may occur in the apertures so that the pins will always tightly fit the apertures thus holding the joints rigidly when in open position.

In order to prevent the losing or mislaying of the pins 10 the same are preferably connected to short chains 12 which in turn are connected with rings 13 arranged on the tubular sections of the side and arch members of the frame.

When the frame is constructed to form a wall or arch tent as shown in the drawings the end members of the frame are connected together by a ridge pole 14 which is preferably formed in a series of jointed sections similar to the jointed sections of the side or leg members of the frame. The ends of the ridge pole may be connected with the arch members of the end frames in any suitable manner said ends of the ridge pole being here shown as having formed thereon suitable eyes 15 which are adapted to be engaged with the upwardly projecting hinge pins 9 of the joints 8 of said arch members.

The covering 16 for the frame may be constructed of canvas or other suitable fabric and at the points where the cover engages the upwardly projecting pins 6 and 9 of the end members of the frame said cover is provided with apertures covered by pockets suitably secured to the outer sides of the cover into which said pins project. By thus covering the openings for the pins any leakage of the tent at these points is prevented.

In the lower edges of the sides of the cover at the point of engagement with the side or leg members of the end frames are arranged metal reinforcing washers 17 through which the ground engaging pins 18 of the ends of the lower sections 3 of said leg members are inserted thereby stretching and holding down the sides of the cover. The reinforcing washers 17 have preferably formed therein an annular groove 19 in which is formed an annular series of perforations 20 by means of which the washer plates may be stitched to the material forming the cover.

In order to prevent the leg members from being forced too far into the ground I preferably provide stop plates 21 which are engaged with the pins 18 before the latter are inserted into the ground and thus form supports for the frame.

As hereinbefore stated the frame may be arranged in any suitable manner for forming tents of different styles and when so arranged the parts or members of the frame will be secured together in any suitable manner, for instance when the end sections of the frame are arranged to form a square tent one of said end sections will be made shorter than the other to pass through beneath and at right angles to the same and when so arranged the locking pin 10 which locks the upper joints of the arch members will be of sufficient length to pass through the joints of both the upper and lower ridge members thereby fastening said members together and at the same time locking the joints of the arches as shown in Fig. 13 of the drawings.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention as defined in the appended claims.

Having thus described my invention what I claim is:

1. In a tent, an end frame comprising legs consisting of a plurality of sections hinged together at their meeting ends, the hinges being so disposed that the sections at opposite ends of an intermediate section will fold against said intermediate section in planes at right angles to each other, and arch members consisting of sections hinged together at their inner ends and having their outer ends hinged to the upper extremities of the legs and bearing against the inner sides of the same.

2. In a tent, an end frame comprising legs consisting of a plurality of sections hinged together at their meeting ends, the hinges being so disposed that the sections at opposite ends of an intermediate section will fold against said intermediate section in planes at right angles to each other, and arch members consisting of sections hinged together at their inner ends and having their outer ends hinged to the outer extremities of the legs and bearing against the inner sides of the same and locking pins inserted through

the several hinge connections transversely to their plane of movement to hold them in extended position.

3. In a tent, an end frame comprising legs consisting of a plurality of sections hinged together at their meeting ends, the hinges being so disposed that the sections at opposite ends of an intermediate section will fold against said intermediate section in planes at right angles to each other, and the uppermost sections having inclined faces on the inner sides of their hinge portions and arch members consisting of sections hinged together at their inner ends and having their outer ends hinged to the upper extremities of the legs and bearing against said inclined faces on the inner sides of the same.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HANS PAUL.

Witnesses:
MABEL M. UNDERWOOD,
ANNA A. MARQUIER.