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PORTABLE SHED, HANGAR, AND OTHER SIMILAR STRUCTURE.

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1,376,937. Patented May 3, 1921.

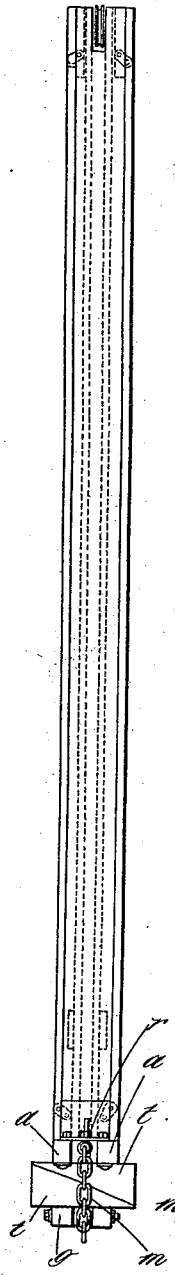


Fig. 2.

Fig. 1.

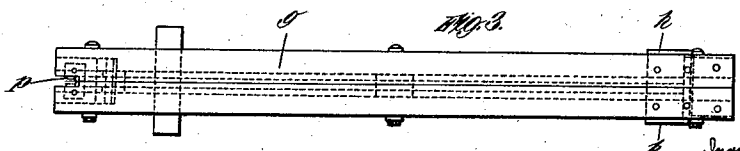


Fig. 3.

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PORTABLE SHED, HANGAR, AND OTHER SIMILAR STRUCTURE.

1,376,937. Specification of Letters Patent. Patented May 3, 1921.

Application filed June 19, 1918. Serial No. 240,867.

To all whom it may concern:

Be it known that we, GASTON HERVIEU and PIERRE MARIE GEORGES MARÉCHAL, citizens of the French Republic, residing at London, England, have invented certain new and useful Improvements in or Relating to Portable Sheds, Hangars, and other Similar Structures, of which the following is a specification.

This invention relates to portable sheds, hangars, and other similar structures, and refers more particularly to an improved constructional unit, element stanchion or the like, which enables the structure to be easily and quickly placed in position even upon rough or sloping ground, without the necessity of constructing foundations, or inserting the supporting elements in the ground, while at the same time enabling a very firm shed or the like to be constructed, and that without the necessity of using guy ropes to insure the stability of the structure, in cases where it is desired to dispense with the use of such devices, and at the same time enabling sheds of greater stability and area to be erected, than is the case with the present methods of construction.

The constructional unit or stanchion made according to the present invention comprises two parts or sills. The upper of these sills has formed with or attached thereto the supporting member to be used in the construction of the shed or the like, and this member may be triangular or of any other suitable form with appropriate struts, as hereinafter more fully described. The upper sill carrying the supporting member is hinged or otherwise suitably attached to or in connection with the lower sill, in such a way that it can be brought into any desired angular position with respect thereto and means are provided so that after the sills have been brought into the correct relative position they may be fixed or locked in such position.

In use, the lower sill rests upon the ground, which may slope in any direction, and the upper sill is brought into a horizontal position after which the locking means is operated, so that a rigid constructional unit is produced, appropriately located for use in erecting the structure.

In order that this invention may be clearly understood, it will now be described with reference to the accompanying drawing, which shows, by way of example a particular constructional unit made according to the said invention and suitable for use in erecting a hangar or shed for a balloon or other aerial craft, or for other purposes.

Figure 1 is a side elevation of the constructional unit.

Fig. 2 is a front elevation of the same.

Fig. 3 is a plan.

The same letters of reference are employed to denote the same parts in all the views.

The particular form of unit illustrated in the drawing comprises an upper sill *a* formed from two wooden beams of plain section. These beams have bolted between them, in the neighborhood of their ends two members *b* and *c* such members being in the present instance of a double T section, of wood or metal. The member *b* as will be seen extends at right angles to the sill *a* and is intended to form the vertical column of the structure. The other member *c* extends to the top and at a suitable angle to the member *b*, so as to form a buttress. The members *b* and *c* are bolted together at the top and may carry suitable brackets for supporting the roof, a pulley for hauling the roofing member into position or other appropriate fittings, as indicated on the drawing. *d* are horizontal or transverse and *e* diagonal struts for strengthening the unit.

The lowermost strut *d* may be utilized for supporting a windlass *f* where a pulley is provided at the top for the purpose of hauling the roofing member into position.

g is the lower sill of metal or other material. The sill *g* has bolted to each side thereof a plate *h*. These plates *h* are provided with bearings for the reception of a pivot pin *k* upon which the upper sill *a* pivots. At the opposite ends of the sills is provided the fixing or interlocking means, which in the present case consists of a chain *m* with large links. *p* is a slotted aperture in the lower sill *g*, the slot being sufficiently small to prevent the chain *m* being pulled through. The upper end of the chain is connected to a rod *q* passing through a plate *r* at the top of the sill *a* and screw tightening means are added. *t* are wedges.

In erecting the constructional unit, the lower sill *g* is placed upon the ground, and it will obviously rest at an angle which depends upon the slope of the ground, where the ground is not horizontal. With an ordinary constructional unit this would cause the principal supporting member to be thrown out of the vertical line, but with the

improved unit the supporting column can be brought into the vertical position.

In order to effect this, wedges *t* are inserted between the sills *g* and *a*, and the upper sill *a*, where it is sloping downward, is gradually raised until the vertical column *b* is in the true vertical position as determined by a plumb line, spirit level or the like. The upper sill *a* is then locked in position by screwing the chain *m* tight by the screw means *s*.

For securing stability, in place of guy ropes, or wires anchored to the ground, it is preferable to use ballast bags, weighted boxes or the like, resting upon, or in connection with the upper sill *a*.

An important advantage accruing from the use of constructional elements of the kind hereinbefore particularly described is that, especially in the case of a shed which is to be covered with canvas, it makes it possible to extend the canvas covering over the outside or sloping portion of the buttresses, instead of bringing it down vertically as is usually the case. With the improved construction, the canvas may extend down the sloping buttresses to the bottom and be secured there by a lacing board or other appropriate means.

It will be seen that this enables a larger area to be included within the shed, and also allows the constructional unit itself to be covered in and protected from the weather; and where the structure is exposed to the wind it is better calculated to withstand high wind pressures.

With the improved unit it is possible to erect a portable shed or the like in practically any position, upon irregular sloping or undulating ground, and at the shortest notice and without previous preparation of the ground, as each of the constructional units can have its lower sill adjusted to the particular slope of the ground where it is to be erected and nevertheless all the vertical columns can be brought correctly into position.

It will be evident that the particular construction of the device may be varied without departing from the principle of the invention, that the various parts may be made of any material or combination of materials of any suitable section according to the uses to which the structure is to be applied.

In place of the chain, any other means may be provided for separating or drawing the sills together with respect to the pivot, as for instance a screw bolt with oppositely directed screw threads at each end passing through appropriate fixed nuts on the sills, a rack and pinion or other like device.

Any other pivotal or hinged connection of an appropriate nature may be substituted for that shown, and other minor modifications may be introduced to suit requirements in particular cases.

What we claim and desire to secure by Letters Patent of the United States of America is:—

A constructional unit or stanchion for use in the erection of portable sheds, hangars and other similar structures, comprising in combination a lower sill adapted to rest upon the ground, said sill having at one end and on each side a plate extending upwardly therefrom, and at its opposite end a slotted aperture, (a triangular stanchion, said stanchion consisting of a horizontal sill built up of two beams placed side by side, a vertical column fixed to said horizontal sill between said beams and extending upwardly from one end thereof and a diagonal buttress member connecting the free ends of said horizontal sill and said vertical column, said vertical column and said buttress member being of double T section,) a pivot pin serving to connect one end of said triangular stanchion between the plates at one end of said lower sill, a threaded rod passing through a plate fixed to the free end of the sill of the stanchion, a chain on one end of said rod adapted to engage the slotted aperture in the adjacent end of the lower sill, and a nut engaging said threaded rod securing the lower sill and the triangular stanchion against movement from one another.

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