

S. CROCKER.
 ADJUSTABLE FRAME FOR TABLE SCREENS.
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Patented Mar. 22, 1910.

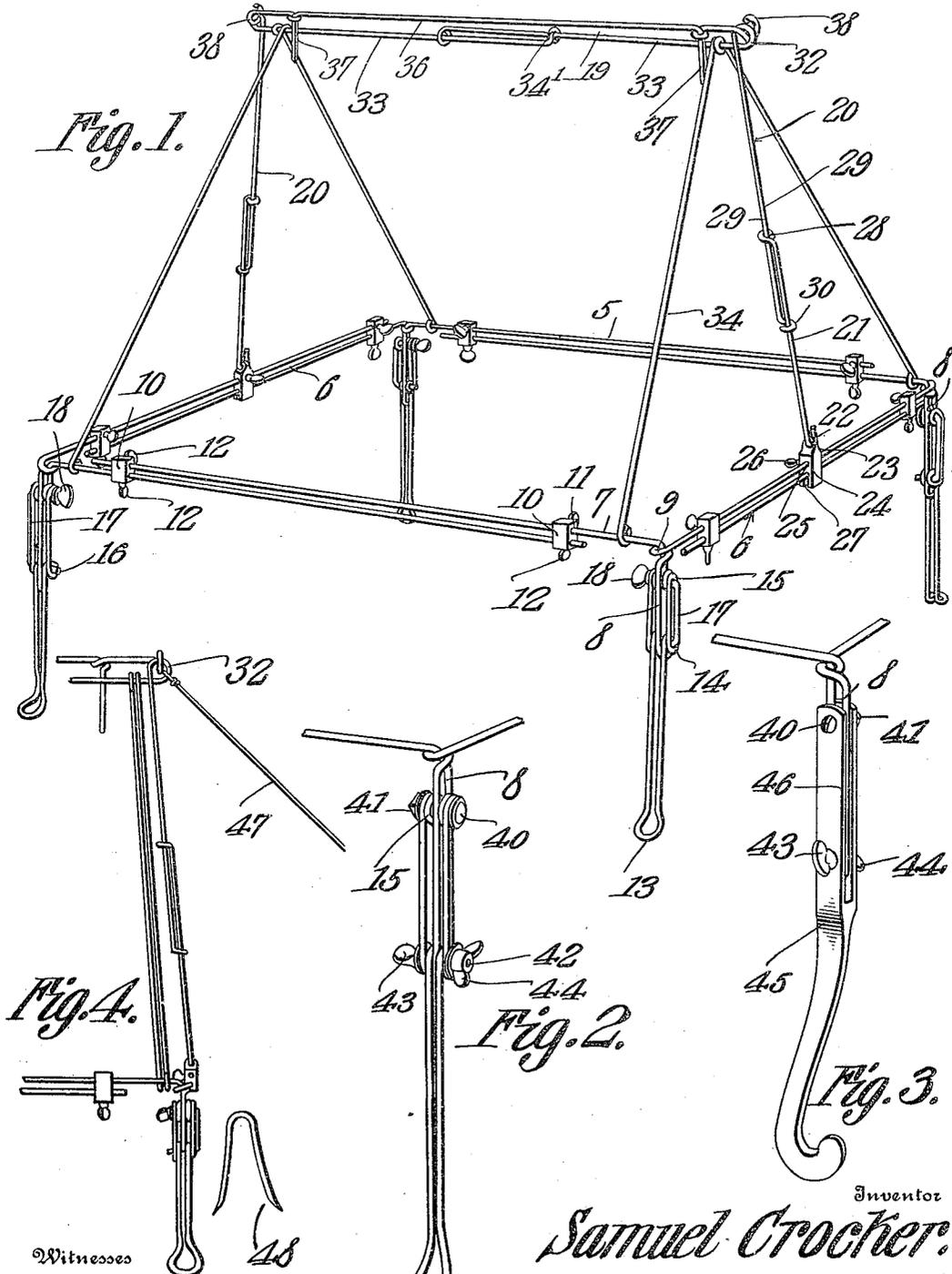


Fig. 4.

Fig. 2.

Fig. 3.

Witnesses

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SAMUEL CROCKER, OF MUSTANG, OKLAHOMA.

ADJUSTABLE FRAME FOR TABLE-SCREENS.

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To all whom it may concern:

Be it known that I, SAMUEL CROCKER, a citizen of the United States, residing at Mustang, in the county of Canadian and State of Oklahoma, have invented a new and useful Adjustable Frame for Table-Screens, of which the following is a specification.

It is the object of the present invention to provide an improved construction of supporting frame for canopies and the like and one object of the invention is to devise a construction of such character that it may be embodied either in a table screen supporting means or in a tent construction.

A further object of the invention is to provide a frame for the purpose stated which will be capable of adjustment to support canopies of various dimensions and which may be collapsed so as to occupy but a small amount of space when not in use.

One of the novel features of the invention resides in the construction of the supporting legs of the device, these legs being so connected with the main frame of the device as to permit them to be readily removed or folded into a position against the sides of the said main frame whereby the device will occupy less space than when they are in normal position.

In the accompanying drawings, Figure 1 is a perspective view of a canopy supporting frame constructed in accordance with the present invention. Fig. 2 is a similar view of one of the supporting legs for the device, showing a slightly modified structure thereof, Fig. 3 is a view similar to Fig. 2 but showing a still further modification, and Fig. 4 is a view in side elevation showing the manner in which the device may be rendered applicable for use as a supporting frame for a tent canvas.

In the drawings, the main frame of the device is shown as comprised of sides indicated in general by the reference numeral 5, and ends, indicated in general by the reference numeral 6, these sides being made up of the relatively angularly extending arms of corner sections which are four in number.

It will be observed from an inspection of Fig. 1 of the drawings that each of the corner sections of the frame, above mentioned, includes relatively right-angularly extending arms or members which are indicated by the numeral 7, and a depending loop 8 located at the point of junction of the arms 7, each

of these corner sections being preferably formed of a single strand of wire or rod metal bent upon itself, first, to form the loop 8, then twisted as at 9 to close the upper end of the loop, and finally with its end portions extending relatively at right angles and also at right angles to the direction of extent of the loop. In other words, the loop 8, when the frame is in use, extends vertically and the arms 7 lie in a horizontal plane, one arm of each corner section comprising a portion of one side 5 of the frame and the other arm of the same corner section comprising a portion of the adjacent end 6 of the frame. The loops 8 serve as attaching means for the supporting legs of the frame embodying the invention and as will be presently fully described, and in order that all of the corner sections of the main frame may be connected to form a complete rectangular frame, there are provided a number of blocks 10 formed each with a pair of openings 11 which are parallel and in the same plane. These blocks 10 are arranged a pair at each side and each end 6 of the main frame and the arms 7 of the corner sections comprising each side and each end of the said main frame are engaged slidably through the openings 11 and are held at adjustments by means of suitable set screws 12 which are inserted through adjacent sides of the blocks 10 and bear each against one of the arms 7.

As will be readily understood from an inspection of Fig. 1 of the drawings, by loosening the set screws 12 of the blocks 10, the frame sections being in closely assembled condition as illustrated in the said Fig. 1 of the drawings, the blocks 10, upon the frame sections being pulled apart, will slide each over one of the arms 7 of the two sections which it holds in adjustment, the said set screws being tightened as soon as the frame has been expanded to the desired extent. It will be readily understood from the foregoing description of the connecting means for the frame sections, that these frame sections are to be adjusted by loosening only one set screw of each block so that, whereas the set screw engaging the arm 7 of one section will be in gripping engagement with the said arm, the set screw of the other block 10 which cooperates with the said arm 7 of the same section, will be loosened so as to permit of the sliding of the arm through this last mentioned block. It will also be understood from the foregoing that the main frame of

the screen supporting device may, by reason of the construction above described, be adjusted to support a canopy, screen, tent canvas, or similar member regardless of the size of the same within, of course, certain limits.

The supporting legs for the main frame of the device are illustrated, in Fig. 1 of the drawings, as comprised each of a single strand of wire bent upon itself midway of its ends to afford a foot 13, the portions of the leg above the foot 13 being bent to form eyes 14 and eyes 15, the eyes 15 being located at the upper extremities of the strands of wire forming the leg. As is clearly shown in the said Fig. 1 of the drawings, the wire, being bent upon itself, affords a leg having spaced portions and these portions, at their upper ends, are so relatively spaced as to leave between them the depending loop 8 at one corner of the frame of the device, eyes 14 and 15 being so relatively spaced as to register with the ends of this loop. Upon assembling the legs with the loops 8 in the relation stated, there are engaged, through the eyes 14, eyes 15, and corresponding ends of the loops 8, the laterally right angularly turned ends 16 of a brace member 17, one of the portions 16 of each brace member being threaded and having engaged thereon a thumb nut 18 whereby the brace member will be held firmly in position, the other portion 16 of the said member, by reason of its engagement through the eyes 14 and loops 8, serving to firmly brace the respective leg against folding upon the corner section with which it is associated.

While the brace members 17 perform the function of holding the legs rigid with respect to the corner sections with which they are associated, it will be readily understood from the foregoing description that by lifting the set screw 18 of each brace member and partly disengaging the brace member so as to bring its portion 16 which engages through the eyes 14 and lower end of the loop 8, out of engagement with these elements, the legs may be swung upon the portions 16 of the respective brace members which engage through the eyes 15 and the upper ends of the loops 8 so that the legs will then lie in position against the ends 6 of the frame, the set screws 18 being again tightened after the legs have been so folded.

While not absolutely essential in all instances, there is preferably provided, in connection with the frame heretofore described and its supporting legs, a top frame which extends upwardly from the aforementioned frame and is adjustable therewith so as not to interfere with the adjustments had between the corner sections of the said frame and among other elements, this top frame includes a top bar or member indicated in general by the reference numeral 19 and end uprights, indicated in general by the refer-

ence numeral 20, which support the said top member 19. In constructing the top member 19 and uprights 20, material of the same character as employed in the construction of the frame previously described, is used and both the top member 19 and the end uprights 20 are extensible and are hence comprised each of members or sections connected for sliding adjustment. One member of each end upright, namely the lower member thereof, is indicated by the numeral 21 and is in the nature of a length of wire or rod material formed at its lower end with an upturned hook 22 which connects pivotally with an eye 23 at the upper end of a block 24, it being understood that by this construction, the sections 21 may be readily disconnected from or connected with its blocks 24. This block 24 is formed with an opening for the passage of that arm 7 of one corner section which constitutes a portion of one end of the main frame, there being a set screw 26 threaded through the block 24 and bearing against this arm whereby to hold the block at adjustment thereon, the block being positioned substantially midway of the ends of the said end of the frame. Similarly, the block 24 is formed in its lower end with a slot 27 in which is received the other arm 7 constituting the end of the frame, this engagement of the block with the last mentioned arm 7 serving to firmly brace the block against turning upon the first mentioned arm upon which it is held at various positions of adjustment.

At the upper end, the lower member 21 of each upright is formed with an eye 28 for the passage of the upper member of the said upright which member is indicated by the numeral 29 and is formed, similarly, with an eye 30 at its lower end through which the lower member 21 of the upright is slidably engaged, it being understood that the two members 29 and 21 may be, by reason of this construction, so adjusted as to lengthen or shorten the upright as a whole. In forming the member 29 of each end upright 20, a length of wire or similar material is bent intermediate of its ends as at 32 to form an eye, the said member 29, and a portion 33 which extends at an angle from the said member 29. The portions 33 just mentioned are formed each at its extremity with an eye 34' through which the other portion 33 is slidably engaged, the said portions when so assembled, constituting the top member 19 of the top frame of the device, it being understood, that by reason of this construction, the said top member is extensible like the uprights 20.

In addition to the top member and the upright just described, the top frame comprises also brace members which are indicated by the numeral 34 and are in the nature of rods formed at their upper and

lower ends with eyes pivotally connecting with the members 33, adjacent the eyes 32, and at their lower ends with the arms 7 which constitute the sides of the frame.

5 These brace members 34 are inextensible, being integral throughout, and therefore they serve to firmly support the top member 19 and upright 20. As above stated, the upper ends of the brace members 34 are pivotally connected with the members 33 constituting the top member 19 and in order to prevent sliding of the upper ends of these brace members 34 along the members 33, there is provided a locking device which will now be described, this device serving the additional function of bracing the members 33 against relative sliding movement whereby the top member as an entirety will be firmly braced against accidental extension. The locking member above described is formed of a rod 36 which, adjacent its ends, is bent to form right angularly projecting arms 37 and at its said ends to form convoluted eyes 38. In assembling the locking member 36 with the top frame 19, the convoluted eyes 38 are engaged with the eyes 32 at the ends of the top member 19 of the said top frame and the arms 37 are then swung downwardly whereby to cause the convolutions of the eyes 38 to ride through the eyes 32 and lock the bar 36 with its arms projecting vertically downwardly. Prior to swinging down the arms 37 of the locking member as above described, the upper ends of the brace members 34 are so positioned as to lie between the adjacent eyes 32 and arms 37 when the locking member is in locked position so that movement of the said upper ends of the brace members along the members 33 of the top frame will be effectually prevented and at the same time the said members 33 will be held against relative sliding movement or in other words the top member composed of these members 33 will be held against accidental extension.

In Fig. 2 of the drawings, the bracing member 17 is dispensed with and in its place there is provided a bolt 40 which is engaged through the eyes 15 and the upper end of the loop 8 and has threaded upon it a nut 41, this bolt serving as a pivot for the leg with which it is associated in the same manner as the upper one of the end portions 16 of the bracing member 17 as heretofore described and shown in Fig. 1 of the drawings. Engaged through the eyes 14 and the lower end of the loop 8 is the shank of a bolt 42 having at one end a flat head 43 and having threaded upon its other end a wing nut 44 it being understood that normally the engagement of this bolt through the eyes 14 and the loop 8 will serve to hold the leg through the eyes of which it is engaged against folding upon the end of the frame of the device but that upon removal of this

bolt 42, the said leg may be swung to the position stated and the bolt either laid aside for further use or reinserted through the eyes 14 to prevent its loss.

In Fig. 3 of the drawings, a construction similar to that shown in Fig. 2 is disclosed with the exception that the leg of the frame is in this instance in the nature of a cast or similarly formed leg 45 bifurcated throughout its upper portion as at 46 to receive the loop 8, the furcations formed by bifurcating the leg as above stated being provided with openings (not shown) for the passage of the bolts 40 and 42 heretofore described in connection with the form of the invention shown in Fig. 2 of the drawings.

Fig. 4 of the drawings illustrates the manner in which the frame embodying the invention may be employed as a supporting frame for a tent canvas and when used in this relation, there is connected to each eye 32, a guy rope 47 which is attached at its other end to a stake or the like suitably located and driven into the ground. It is also desirable, in using the frame in the manner stated, to secure the supporting legs of the frame to the ground and for this purpose there is provided an anchor which is of substantially inverted U-shape with its legs spread apart or diverging as clearly shown in the said Fig. 4, this anchor being indicated by the numeral 48 and being engaged through the loop forming the foot 13 of the said leg, it being understood that the anchor is to be driven into the ground in the same manner as if it were a stake.

From the foregoing description of the invention it will be readily understood that the main frame may be contracted or expanded to the desired dimensions and that simultaneously with this adjustment, the members of the top frame will be adjusted and that after such adjustment has been obtained, the parts may be firmly locked in position and against accidental disarrangement. Also, as heretofore stated, the top frame may be omitted if found expedient or desirable, it being capable of being readily dismounted from the main frame, and also if desired, the supporting legs may be removed from the loops 8 and these corner loops may then serve as a supporting means for the frame. Therefore, the invention is well adapted to use under numerous different conditions and is capable of a wide range of adjustment.

What is claimed is:—

1. In a device of the class described, a frame comprising extensible sides, supporting legs located one at each corner of the frame, uprights extending upwardly from opposite sides of the frame, an extensible top member supported at the upper end of the uprights, brace members connecting the top member and the other sides of the frame, 130

and a locking bar mounted upon the top member and having depending portions resting against the said member and acting to retain the upper ends of the brace members
5 immovable with respect to the said top member.

2. In a frame of the class described, corner frame members formed of a single strand of wire bent to afford a closed depending loop constituting a leg section, the
10 portions of the wire at each side of the loop constituting each one section of one side of the frame, means connecting the related side sections, and a leg section assembled with each of the first mentioned
15

leg sections and comprising a single strand of wire bent upon itself to afford spaced portions straddling the respective leg sections at the corners and securing bolts engaged through the said loops and the portions of the last mentioned leg sections
20 straddling the loops.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

SAMUEL CROCKER.

Witnesses:

R. C. MELOY,
T. J. VAN ARSDELL.