May 18, 1937. C. T. SHOOP 2,080,441

COLLAPSIBLE STRUCTURE

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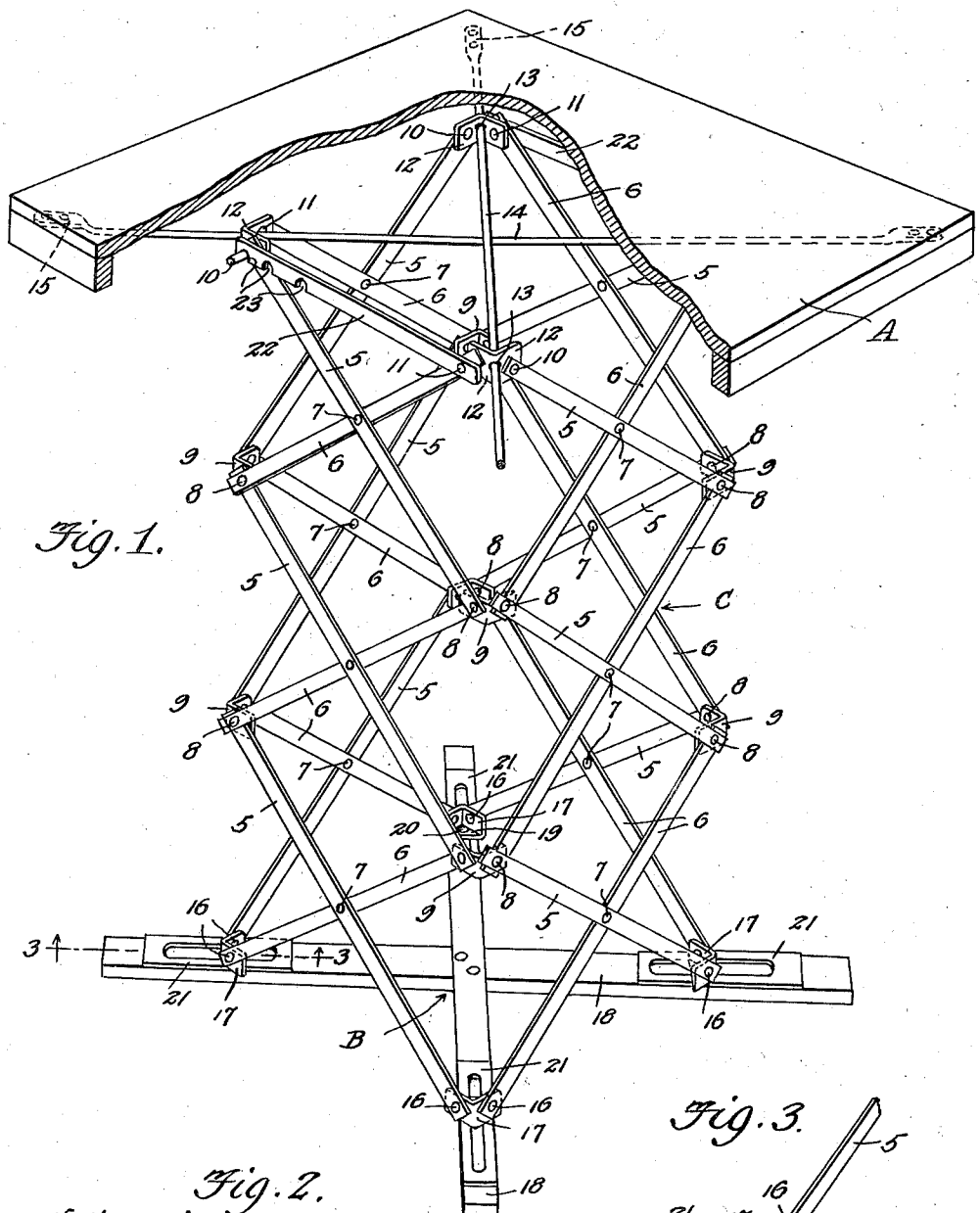


Fig. 1.

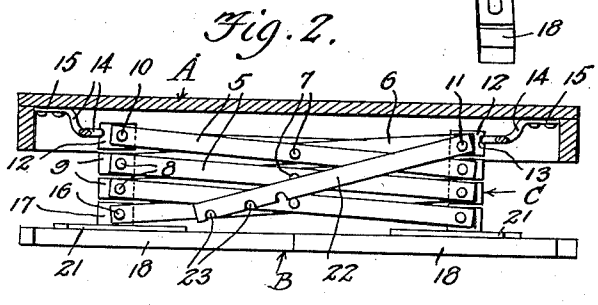


Fig. 2.

Fig. 3.

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COLLAPSIBLE STRUCTURE

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3 Claims. (Cl. 311—95)

This invention has relation to collapsible supporting structures and while not necessarily restricted to such use, the same is disclosed as an extensible pedestal for a table or analogous supporting structure.

Primarily, the invention comprehends a supporting structure which is collapsible to a compact condition so as to occupy a minimum amount of space for storage and shipment and which is extensible to a set up condition and when so extended provides a firm support.

The invention further resides in a supporting structure of the indicated character having means for locking the same in extended position, which means is so constructed as to permit of the selective locking of the device in a plurality of variously extended positions.

More specifically the invention provides a collapsible supporting structure including a base and a head and a contractible and extensible body made up of a plurality of sets of lazy-tongs arranged in contiguous angularly disposed planes with pivotal connections between the terminals of the tongs of adjacent sets and with slidable and pivotal connections between the endmost tongs of said sets and the base and head respectively.

With the above recited and other objects in view, the invention is more particularly set forth in the specification and drawing wherein there is disclosed a preferred form and adaptation of the invention, while the appended claims cover variations and modifications in the structure and use of the invention.

In the drawing:

Fig. 1 is a perspective view of a table embodying a collapsible supporting structure made up in accordance with the invention, illustrating the same in extended condition and with parts broken away to disclose the underlying structure.

Fig. 2 is a side view partially in section illustrating the table in collapsed condition.

Fig. 3 is a fragmentary sectional view taken approximately on line 3—3 of Fig. 1.

In the adaptation of the invention herein disclosed, the same is illustrated as embodied in a table structure, although it is to be understood that the invention is capable of use for other purposes, wherein A designates generally the table top or head, B the base and C the pedestal. The pedestal C is in the form of a contractible and extensible body and includes a plurality of sets of lazy-tongs, four sets being shown in the present embodiment and arranged in contiguous angularly disposed planes to form a frame of rectangular shape having sides of equal widths and extensible in the same direction. Each set of lazy-tongs includes pairs of crossed bars 5 and 6 pivotally connected medially as at 7 and pivotally connected at their ends as at 8 to the ends of the crossed bars of adjacent pairs. The adjacent sets of lazy-tongs are connected together by angle brackets 9 and the pivots 8 which extend through the angularly disposed leaves of the brackets. The free terminals of the upper pair of crossed bars 5 and 6 of each lazy-tong set are pivotally connected as at 10 and 11 to angle brackets 12 which connect the upper terminals of adjacent sets. The angle brackets 12 are provided with apertures 13 at the juncture of their angularly disposed leaves for slidably connecting the upper end of the pedestal C with the table top or equivalent element by means of crossed rods 14 which extend through the apertures and are suitably anchored as at 15 to the table top. The free terminals of the lower pair of crossed rods 5 and 6 of each set are pivotally connected as at 16 to angle brackets 17, which angle brackets are slidably connected with the base B. As illustrated, the base B includes crossed bars 18 adapted to rest upon a supporting surface and permanently secured together intermediate their ends. The lower angle brackets 17 include a web 19 extending between the leaves thereof and a headed pin 20 extends downwardly through a slotted plate 21 for slidably connecting the corners of the pedestal with the base B to permit of the contraction and extension of the pedestal. While the pedestal is illustrated as composed of four sets of lazy-tongs arranged in contiguous angularly disposed planes, it is, of course, obvious that within the scope of the invention the pedestal may consist of three or more sets so arranged and connected with each other and with the base and top.

Any suitable means may be provided for locking the pedestal in extended position, but as illustrated a pair of latch bars 22 are provided on opposite sides at the upper end of the pedestal, the latch bars being pivoted on the pivots 11 and provided with a plurality of notches 23 in its lower edge for selective engagement with the pivots 10 whereby the pedestal may be locked in one of a number of variously extended positions. When not in use, the latch bars 22 are disconnected permitting the collapsing of the pedestal to a position illustrated in Fig. 2 where the top A is moved into close proximity to the base B with the collapsed pedestal disposed therebetween.

What is claimed is:

1. A collapsible supporting structure including a base comprising a pair of horizontally disposed crossed members, a head having a supporting top and a pair of crossed members secured at their ends to the underside thereof and a contractible and extensible body comprising a plurality of sets of lazy-tongs arranged in contiguous angularly disposed planes, pivotal connections between the terminals of the tongs of adjacent sets, angle brackets pivotally connecting the adjacent upper ends of the uppermost sets of lazy-tongs, said brackets being apertured to slidably receive the crossed members of the head and angle brackets pivotally connecting the adjacent lower ends of the lowermost sets of lazy-tongs, and said brackets being slidably connected with the crossed members of the base.

2. A collapsible supporting structure including a base comprising a pair of horizontally disposed crossed bars, slotted guideways at the opposite ends of each cross bar, a head consisting of a top panel and a pair of crossed rods secured respectively at their ends to the underside of said panel and a vertically contractible and extensible body comprising a plurality of sets of lazy-tongs arranged in contiguous angularly disposed planes, angle plates to which the ends of adjacent sets of lazy-tongs are pivotally connected, the uppermost angle plates having apertures slidably engaging the crossed rods of the head, the lowermost angle plates having horizontal webs and members extending through said web and engaging in the slotted guideways at the end of the cross bars of the base.

3. A collapsible supporting structure including a base comprising a pair of horizontally disposed crossed bars, slotted guideways at the opposite ends of each cross bar, a head consisting of a top panel and a pair of crossed rods secured respectively at their ends to the underside of said panel and a vertically contractible and extensible body comprising a plurality of sets of lazy-tongs arranged in contiguous angularly disposed planes, angle plates to which the ends of adjacent sets of lazy-tongs are pivotally connected, the uppermost angle plates having apertures slidably engaging the crossed rods of the head, the lowermost angle plates having horizontal webs and members extending through said web and engaging in the slotted guideways at the end of the cross bars of the base, and means for selectively locking the extensible body in a plurality of variously extended positions.

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