This invention relates to combined cots, stretchers, tables and swings, and to such combined structures making either form of equipment readily adaptable to any one of the others without depriving any of such forms of any of the valuable qualities it would have without such means of adaptation.

It is an object of my novel improvements to make my combined structure adapted to be readily packed in a single bundle, adapted to be easily disassembled for use in the desired form, or to be changed to anyone of the other forms. It is especially valuable for the reason that, while the cot bottom is made yieldable and flexible for great comfort, the top provided for the table, when the structure is to be so used, is made quite rigid and provides a flat and closed upper surface, the legs being lengthened for the table use over that intended for the cot or stretcher.

These various uses and forms are attained by adapting many of the parts for more than one use, and providing suitable connections between the various parts in an alternative relation.

With these and other objects of my invention in view, the invention consists of certain novel features and combinations, as will be more fully described and particularly pointed out in the appended claims and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a cot construction with other parts shown diagrammatically;

Figure 2 is a perspective view of portions of the structure, indicating the relative arrangement of parts to adapt the same for use as a table, but some portions being broken away to show changes in certain supporting elements;

Figure 3 is a view of a complete roll as it will appear when all parts are packed within the table top;

Figure 4 is a view of the side brace for the cot side bars;

Figure 5 is a detail view of one end of an end bar of the cot;

Figure 6 is a detail view of an armored end of a side bar;

Figure 7 is a perspective detail of the cot leg;

Figure 8 is a view of the leg extension for the table structure;

Figure 9 is a detail showing the iron clamp for attaching the stretcher handles, and Figure 10 is an edge view of the slatted top with its canvas backing.

The basic structure for the entire combination is a collapsible frame made of said bars 5 and end bars 6, the latter being hollow, and may be a channel iron with closed ends 32, and the bars 5 each formed of longitudinal sections hinged together at their ends at 10 to permit doubling the side bars. In packing inside the roll, as will be later explained.

An iron channel bar 17 is provided with spaced key-hole slots 16 in the mid wall which by longitudinal movement on the sections of the bars 5, will lock or unlock the sections in alignment, the sections having nails or screws for engagement in the slots. The legs 8 are also formed of channel iron having the mid wall cut back from the ends at 30 to provide a supporting edge to bear against the under side of the bars 5 to hold the legs in an inclined position, as shown in Figs. 1 and 2, the extended ears 23 being pivoted to the said bars 5 by a suitable pin or bolt 31. The legs 8 have a key-hole slot 21 at the mid-wall and another in one of the flanges near the lower end of the leg as at 22. See Figs. 1, 2 and 7.

The extension element 9 for application within the hollow member 8 may be formed of nearly any material and is preferably solid. It is provided with a screw or nail head or pin 19 at one end, a transverse opening 25 therethrough near its mid point, and a curved portion 17 near the lower end adapted for a hand-hold. The pin 19 may be locked in the slot 21 when the two leg sections are to be united, or the part 9 may be removed from 8 and the pin 19 inserted in the slot 22 of part 8 to enable the extension 9 to be supported in a vertical position at the side of the bars 5 so that the extensions 9 may serve as short masts adjacent the corners of the cot to hold suitable coverings or awnings over the cot, such as netting to protect the occupant of the cot from flies or other insects, or for water-proof coverings to protect the occupant from showers or falling snow and, if carefully secured on the parts 9 and draped about the parts 5 and 6, will protect from winds, when such protection is needed.

When used as a cot or stretcher, wire supporting screen 11 is suspended from the end bars 6 by means of coiled springs 12 hooked
into the upper flange of the bar 6 and connected with the screen, as shown in Figs. 1, 2 and 5. When the same is to be used for a table, the legs 8 are extended by attaching thereto the parts 9, and closely assembled slats 13 are covered over the frame by applying them transverse of the frame with their ends supported upon the side bars 5, as shown in Fig. 2. These slats are all secured at their bottom surfaces to a strong textile material, such as canvas 14, and the slats are positioned thereon in contiguity so that there results a level and closely mounted table surface, and one which will permit rolling the same under and about the canvas so that the slats will separate somewhat as they are rolled up, as shown in Fig. 3. Sufficient of the slatted surface is shown in Fig. 2 to illustrate the manner of applying it on the cot when it is desired to do so.

In some cases the user will have other utensils with him that he will wish to keep covered up and associated with the main structure, such as certain dishware or possibly bed clothing or table cloths or towels. My particular structure is readily adapted to meet this condition, and I assemble the parts in the following manner—the side bars 5 are disconnected for the moment from the end bars 6, when the bars 6 together with the screen 11 are turned over or reversed, so that the screen 11 will then be attached to a lower flange of the bars 6, instead of the upper flange, after which the bars are again connected to the ends of the bars 5 in the same relation as before. Fig. 1 shows the screen 11 attached to the upper flanges of 6, as also does Fig. 3, while Fig. 2 shows the collars 13 and screen 11 connected to the lower flanges. By the latter arrangement, it will be clear that there will be a considerable cavity or space in between the screen on the lower side and the slatted surface above, which may well be utilized for packing away some of the articles named above. This is made all the more serviceable because the screen will normally sag in the center more or less thus affording all the more space for receiving these articles.

It is to be clearly understood that it is not at all essential that the bars and screen be reversed in the manner stated in order to change the cot or stretcher to a table. The slats may be applied to the cot shown in Fig. 1 without any other change whatever, save that of lengthening the legs. If such space intermediate the screen and slats is desired, Fig. 2 shows how it may be provided without exposing the articles to the floor or ground, and without packing them away from proper ventilation. I regard this feature as having great value, and is provided without adding other equipment than is used for the cot or table.

The cot may also serve the purpose of a stretcher or a means for carrying many things thereon while in its assembled relation of parts. I accomplish this by utilizing the leg parts 9 as handles for carrying purposes. To do this, small cavities or sockets 29 are provided at each end of the side bars 5 somewhat remote from the end bars, 6. Steel clevis bands 15 are provided for each corner of the cot in the form of a channel iron but having the flange ends bent in toward each other leaving an opening between the ends just sufficient to receive therein in the width of the bars 5. The said bands can then be hung upon the bars, as shown in dotted lines in Fig. 1, after which the leg part 9 may be inserted lengthwise above the bar 5, so that the band will embrace the two parts 5 and 9, as shown in Fig. 9. Since the pin 19 of the leg 9 will readily sink into the cavity 29 of 5, and the handholes 17 are directed downward, the part 9 serves as a strong but detachable handle for a stretcher. There will be a handle for each corner of the frame.

The frame may also be used as a swing by providing hooks 35 which are provided at the ends of rods or chains 27, the latter being united suitably by a ring 28 from which the weight of the frame may be borne by a single chain shown in Fig. 9, which may be attached to any overhead support. Holes 20 are provided in the flange of the end members 6 into which the hooks 35 may be hooked detachably. There will be rods and hooks for each corner of the frame, so that the frame will be suspended in a balanced manner.

When the masts formed by erecting the parts 9 upright are in position, a nail or pin 24 is inserted through the opening 25 of the leg and through suitable holes in the bars 5. This will hold the masts against strain, as the pulling tendency of the masts or cover is acting inward toward the frame and not tending to separate the masts.

The ends of the bars 5 are protected by plates 26, shown in Fig. 6, to resist wear on the wooden bars, the entire bar being then provided with openings 33 which register with openings through the flanges of the bars 6 when the ends of 5 are inserted in bars 6, and suitable pins or bolts 18 are then inserted to detachably lock the parts together. At one corner 34 the plates and bar ends are curved to make possible easier swinging of the bar 5 within the socket formed at the end of the bar 6, when the pins 18 are removed. This will be of service in packing the bars 5 and 6 together when they are to be enclosed within the bundle protected by the slats, as shown in Fig. 3. The bands 15 are not usually connected to the bars 5 and 9 except when the frame is to be used as a stretcher. Also, the rods 27 and hooks 35 are detached from
the holes 20 except when the frame is used as a swing.

From the above description and illustrations, it is believed that the manner of assembling and of detaching for packing will be evident. Assuming that all loose parts are in the rolled bundle, and it is desired to use the frame for a table, the bars 5 are connected to the slats of the bars 6, with the latter positioned with the wire netting 11 connected to the upper flange or the lower flange of 6, depending upon whether the space between the slats and screen is to be utilized for packing purposes, the legs 8 are swung outward into active position on their pivots 31 and the extension legs 9 are connected onto 8, as shown. The slatted surface is then applied to the top of the bars 5 by unrolling whereby a smooth tight surface is provided. No special provision is made for means to secure the slat device to the cot frame, as any suitable means may be used, such as hooks and eye parts which may be inserted in the respective parts.

Of course, it is clear that when the bundle is packed, the parts 5 are folded together on their hinges 10, and will be opened and held in alignment by means of the brace piece 7 whether the frame is to be used for a cot or a table. The frame is now in its highest position because of the use of the longest support legs 8 and 9 which is the usual position when the article is to be used as a table. In this use, as well as when the stretcher handles are to be applied, the hooks 35 are removed from the holes 20, though they may remain if the slatted top does not extend to the extreme end of the frame.

If now, the structure is to be used for the other purposes, the legs 9 are detached and the slatted top 13 is removed, and the screen 11 preferably placed in contact with the upper flange of 6, when a cot results. If an awning is desired, the parts 9 are attached in the manner shown in Fig. 1 at one corner with the parts 9 forming masts which will support light netting, water-proof covering or both. If a swing structure is desired, the hooks 35 may be inserted, if they are not already secured, and the chains connected for suspending the cot frame from some overhead support as the limb of a tree.

If portable means is needed, as in the use as a stretcher, the parts 9 are connected to the ends of the bars 5, the hooks 35 being removed, by the bands 15, and hand-holds are thereby provided which are easily detachable from the frame and at the same time are strong and convenient for carrying the weight of the cot and occupant. My structure therefore affords a very efficient combination means for camping purposes where a stretcher is needed and at the same time tables are at the call of any authority requiring the same, as in army service.

My improved combination structure is believed to be particularly useful in that it furnishes so many different articles though much the same parts are utilized in the several arrangements. It is believed to be essentially novel to provide a table structure having beneath its top smooth surface a wire screen spaced somewhat from the table top to provide a shallow cavity for storage purposes. The arrangement of the two sections each of the supporting legs detachable for providing a longer or shorter leg, when used for a table and cot combined, seems also to be novel. My structure provides selectively, then, a cot, table, swing, stretcher, or an awning-covered frame for protection from the elements. The latter will be useful either with the cot, the stretcher or the swing arrangement.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A convertible bed comprising a frame, supporting legs pivoted to said frame, a flexible fabric bottom suspended from the ends of said frame, a removable table top for resting upon said frame above the fabric bottom, elongated pieces having means thereon for detachably securing one end of each to the lower ends of the said supporting legs to lengthen the latter when the structure is to be used as a table, and said elongated pieces having means thereon for securing the same in a vertical position at the corners of the frame and to the frame and legs, so that they may serve as supports for an overhanging covering, when the structure is to be used as a protected cot.

2. A convertible bed comprising a frame, supporting legs pivoted to said frame, a flexible fabric bottom suspended from the ends of said frame, a removable table top for resting upon said frame above the fabric bottom, elongated pieces having means thereon for detachably securing one end of each to the lower ends of the supporting legs to lengthen the latter when the structure is to be used as a table, and said elongated pieces having means thereon for securing the same upon and above the ends of the frame pieces in an overhanging position at the corners of said frames, so that the pieces may serve as hand-holds when the structure is to be used as a stretcher.

3. A convertible structure comprising a frame, including end members and wooden side bars whose ends are detachably secured to said members, a bed bottom supported by said members, a removable foldable and slatted table top comprising a series of parallel slats mounted on the surface on a canvas backing in edge-to-edge relation whereby the top may be rolled up about the other portions and sections of the structure for transportation, supporting leg members for
said frame comprising metal channel members the mid-wall of each being separated from both side flanges at one end of each member and cut away from the main portion of said mid-wall to form extended ears connected by a shoulder at the end of the mid-wall, there being apertures in said ears in register, there being a key-hole slot in the mid-wall adjacent said shoulder and another in one of the side flanges near the opposite end of the leg, means for pivoting the leg to the side bar comprising a pin inserted through the said apertures and through a suitable opening in the bar, and solid pieces having a pin adjacent one end adapted to seat in the uppermost slot of said leg when the structure is to be used as a table, for the purpose of lengthening the leg, and being removable from said slot when the structure is to be used as a cot.

4. A sectional leg member comprising a main section of metal channel form in cross section, the mid-wall being shorter at one end than the flanges, there being apertures in said ears and key slots in the upper end of the shortened mid-wall and the lower end of one of the flanges, and an auxiliary section of solid material fitting within the flanges of the main section and having a pin projecting therefrom near one end thereof whereby the auxiliary section may be detachably connected to said main section by fitting the pin in the mid-wall, or the main section may support the other section by inverting the latter and inserting the pin in the slot in the flange.

5. A convertible structure comprising a rectangular frame whose end pieces are detachably connected to the ends of the side bars, the latter comprising sections hinged together whereby they may be doubled together, and channel braces having pin and key slot locking attachment with the sections to hold the side bars in straight position, a flexible bed bottom having means for detachably securing its ends to said end pieces, a slatted table top mounted on a textile backing whereby the slats may be rolled together inwardly about the backing, supporting legs including main sections pivoted to said bars and auxiliary sections having means for connecting with the main sections to lengthen the legs, means for alternatively connecting the said auxiliary sections to the main sections in inverted position to provide supporting means for a covering and means for connecting them with the ends of the bars in projecting relation to provide hand-holds, whereby the structure may be rolled up with the end pieces, bars, braces, leg sections and flexible bottom enclosed in a unitary bundle within the top.

In testimony whereof I hereunto affix my signature.

FREDERICK C. STOUTENBURG.