This invention relates to bed sheets, and especially to a special fitted type of bed sheets that are particularly designed for use as upper bed sheets but which in one form of the invention are designed for use as bottom bed sheets.

Therefore there have been various efforts made to provide fitted bed sheets of special contours for engaging a bed mattress so that the sheet will be retained in snug engagement with such mattress or other positioning member. These fitted or specially shaped bed sheets have usually been quite difficult to engage with a mattress, and it has been difficult to construct such bed sheets so that they would fit a specially sized or shape mattress. Usually such fitted sheets have been relatively complex and hence have been somewhat costly to produce and sell commercially. Also, it is difficult to iron prior types of fitted sheets as they can not be flattened. Another objection of various types of fitted bed sheets is that different styles of bed sheets have been required for the lower or bottom sheet and for the upper sheet of a pair of sheets. Inasmuch as the bottom sheets usually wear much more rapidly in a pair of sheets than the upper sheet, this is a disadvantage inasmuch as one would have to buy separate bottom sheets and these could not be matched with any special color or size of an upper sheet originally bought as one of a pair of sheets.

The general object of the present invention is to avoid and overcome the foregoing and other difficulties with and disadvantages of present types of sheets and to provide a special fitted sheet that is provided with end corners for engaging a mattress at only one pair of ends of a sheet. Another object of the invention is to provide a fitted sheet especially adapted for use as an upper sheet, and which sheet is of inexpensive, uncomplicated construction and which can be readily cut from flat sheet material.

Yet another object of the invention is to provide a special fitted bed sheet for use as an upper sheet and wherein bottom pockets are provided for engaging with a mattress and wherein special gussets are provided at the sides of the sheet at the bottom corners thereof to provide leg room in the lower portion of the sheet when engaged with a bed or mattress.

A further object of the invention is to provide fitted sheets with special mattress engaging pockets at only one end of the sheet and wherein the bottom sheet of a pair of the fitted sheets engaged with a mattress could have the pockets thereof engaged with the upper end of the mattress and have the lower end of such bottom sheet secured to the mattress by the pocket portions of an upper sheet so engaged with the lower end of the mattress and extending over the mattress.

Yet another object of the invention is to provide pocket members in sheets for engaging a mattress and with such pockets being adapted to be disassembled and flattened so that the sheets can be ironed readily.

Yet a further object is to cut substantially triangular pieces from the material used in making bed sheets to aid in providing rounded corners on a finished bed sheet.

The foregoing and other objects and advantages of the invention will be made more apparent as the specification proceeds.

For a better understanding of the invention, reference should be had to the accompanying drawings wherein currently preferred embodiments of the invention are shown and wherein:

Fig. 1 is a broken away plan of a flat pattern of one fitted sheet of the invention;

Fig. 2 shows the first operation in securing the bottom portion of the sheet of Fig. 1 to the lower part of an end portion of the sheet;

Fig. 3 shows the next operations of sewing together the upper edge of the end portion of the sheet to the side of the sheet and the sewing of edges of the side and end portions to the top portion of the sheet and with the corner and end of the sheet being in an open non-operative position;

Fig. 4 is a fragmentary perspective showing the top sheet of the invention in engagement with a mattress;

Fig. 5 is a fragmentary bottom perspective view of the sheet and mattress of Fig. 4;

Fig. 6 is a fragmentary lay out of a sheet of the invention equipped with slide fastener means for securing the sheet in desired pocket form at one corner thereof;

Fig. 7 is a flat lay out of a different style of sheet embodying the principles of the invention;

Fig. 8 is a fragmentary bottom perspective of the sheet of Fig. 7; and

Fig. 9 is an enlarged vertical section taken on line 9—9 of Fig. 4.

The present invention relates to a bed sheet wherein a sheet member is provided that has top and bottom portions with substantially triangular sections removed from the top portion of the sheet member at least at the bottom corners thereof where such top portion engages the end portion of the bed sheet member, the bottom portion also having substantially triangular sections removed from the corners thereof where the bottom portion joins the end portion so that free end sections are provided on the end portion of the sheet member whereby the bottom portion may be folded under the top portion and have the end sections of the end portion secured both to the bottom portion and to the top portion of the sheet member to aid in providing rounded corners on the completed sheet and to provide an end pocket for engaging an end portion of the mattresses. The invention also relates to the provision of special gusset members used to connect free end sections of the end portion of the sheet to the side portions of the sheet member so that the bottom portion of the sheet can be snugly engaged with the mattress and leave the upper portion of the sheet free for limited upward movement with relation to the mattress.

With reference to the details of the accompanying drawings, a novel fitted bed sheet of the invention is indicated as a whole by the numeral 1 and Fig. 1 shows a flat pattern of this sheet. The sheet includes a top portion 2, side portions 3 and 4, an end portion 5 and a bottom portion 6 with all of such top, side, end and bottom portions being integrally formed from one flat sheet member as laid out in Fig. 1. As an important feature of the invention, substantially triangular sections each of which has at least one acute edge, 7 and 8 are removed from the top portion 2 of the sheet at the place where such top portion joins the end portion 5 at the lower corners of the top portion of the sheet. Likewise, at the edges of the bottom portion 6 where it engages the end portion 5, similar substantially triangular portions are cut from the sheet blank so that rounded corners 9 and 10 are...
provided on the bottom portion 6 of the sheet where it engages the end portion 5.

As an important feature of the invention, substantially free end sections 11 and 12 are provided on the end portion 5 at the lateral margins thereof by the removal 5 of the sections to leave the rounded corners 7, 8, 9 and 10 and by the forming of such end portion laterally of the sheet. It will be noted that the upper edges of such free end sections are shorter than the lower edges and that such top and bottom portions of the end sections are joined by a slanted line indicated at C to D in the drawing.

In order to complete the desired fitted sheet from the cut pattern therefor, first the edges A—B and C—D are sewed or otherwise suitably secured together, as indicated in Fig. 2. Next the sections E—D and F—H are secured to the contoured top portion of the sheet indicated by the line E—F. After such portions of the sheet have been fastened together, then the fitted sheet can be completed and a desired mattress engaging pocket can be provided on the end of the sheet by sewing or otherwise securing the edge D—C to the portion H—G of the sheet so that the corner part of the fitted sheet is completed, as indicated in Fig. 3. Both lower corners of the sheet are of similar construction so that when such fitted sheet is engaged with a mattress 13, as indicated in Fig. 4, the mattress will smoothly engage the pockets produced in the end of the sheet and the more or less gusset-like end parts of the end portion 5 of the sheet will provide a folded section under each of the sides 3 and 4 of the sheets where they extend laterally over and down around the mattress 13 with which the sheet is engaged, all as indicated in Fig. 4.

Fig. 5 of the drawings shows that the bottom portion 6 of the fitted sheet of the invention extends transversely across the mattress 13 and is in snug engagement therewith. The slanted end sections 11 and 12 provided on the end portion 5 of the sheet provides additional sheet space or length so that the top portion 2 of the sheet can be freely raised a short distance adjacent the bottom end of the sheet where engaged with the mattress by the pocket formed in such lower end of the sheet so that sufficient foot and leg room is provided for a person on the mattress 13 with the sheet 1 over him.

Inasmuch as sometimes it is desired to facilitate the ironing of fitted sheets like that of the invention, Fig. 6 of the drawings shows a modified form of the invention wherein a fitted sheet 1a of the invention which can be substantially flattened for ironing is indicated and has two slide fasteners means extending between the points D'H' and G'C' of the sheet and also between the points B'C' and B'A' of the sheet. Thus movement of the two slide fasteners to their closed positions will provide a desired pocket member in the lower portion of the sheet. Of course both corners of the sheet have similar closure means provided thereon. It will be realized that snap fasteners, for example, could also be used for securing the adjacent edges of the sheet 1a of the invention together when the sheet is operatively positioned.

Fig. 7 of the drawings shows a modified form of the invention wherein a sheet member 20 is provided and it has a side portion 22 provided therefor whereas a side bottom portion 24. All of these portions of the sheet are integral formed. The drawing clearly shows that substantially triangular portions have been removed from the top portion 20 of the sheet to form a curved surface 25 at a corner thereof, whereas a similar curved corner 26 is provided on the bottom portion 24 of the sheet. Free end sections 27 and 28, respectively are provided on the end 23 and the side 21 of the sheet of the invention and a desired curved or fitted corner may be provided on the sheet when the upper edges of the end sections, as indicated M—N and O—P are sewed or otherwise secured to the curved portion M—P of the top part of the sheet. The vertically extending portions N—Q and O—R of the end and side of the sheet and also are secured together and a sheet then be completed by sewing the bottom portion 24 along the line S—T to the surfaces S—Q and R—U of the sheet after which, or before which the end portion of the side 22 indicated at U—V can likewise be secured to the same bottom edges of the sheet so that a fitted corner is provided with overlapped bottom end and side bottom portions secured together only at the corners of the pocket so produced. All four corners of the sheet are finished in the same manner.

It is thought that the triangularly shaped end portions of the end sections 11 and 12 are very important in providing the extra portions in the finished sheet to permit upward movement of the top portion of the sheet.

It will be realized that the pattern shown for the sheets may provide a little extra length of fabric to facilitate securing or overlapping adjacent edges of the sheet sections together. In varying the sheets of the invention to different thicknesses of mattresses, or to different radii corners, then the curves such as those indicated at E—F and A—B in Fig. 1 can be altered to vary such curve to the actual mattress contour. Of course, the ends 5 of the sheet of the invention as shown in Fig. 1 would likewise be varied in thickness with different mattress thicknesses.

It is contended that the sheets of the invention can be readily cut from any suitable fabric and that the adjacent portions of the sheets can be easily sewed together as described hereinbefore to complete the sheets of the invention. Preferably the sheet of the invention referred to in Figs. 1 through 5 would be used as a top sheet only, but as explained hereinbefore such sheet may also be used as a bottom sheet when desired. The sheet of the invention shown in Fig. 7 can most conveniently be used as a bottom sheet.

It should be noted that the point H, Fig. 1, may be moved up towards the point F if desired and a little more length be added to the edge E—D to compensate for the change of location of H. In fact, the end sections or gussets 11 and 12 may be of substantially rectangular shape by moving the point D to be about aligned longitudinally of the sheet with C. Then securing the edge C—D to the edge G—H will provide additional pocket forming material in the completed sheet and permit greater freedom of movement of the top portion 2.

For some sheets, particularly if slide fasteners are used therein, the portion E—F—H in Fig. 1 may be left in the sheet member. If only one slide fastener is used, a separate piece is cut from the sheet pattern and the slide would go from A to B to E to D and then join C—G to end the slide movement.

For clarity in the drawings, the seam formed between the end portion 5 and the bottom portion 6 of the sheet is indicated by the numeral 31, whereas the numeral 30 is used for representing the diagonal seam connecting the top and bottom portions of the sheet when the sheet is operatively positioned as indicated in Fig. 4. Such operative positioning of the sheet produces a bulge or loop of fabric 32 in the side portion of the sheet where the overhangs the mattress. The production of this loop 32 is an important feature of the invention by which "toe space" is provided in the sheet of the invention when operatively positioned.

It is thought that the objects of the invention are achieved by the provision of the novel sheets of the invention which are adapted to fit accurately upon mattresses and be retained snugly in engagement therewith.

While several complete embodiments of the invention have been disclosed herein, it will be appreciated that modification of these particular embodiments of the invention may be resorted to without departing from the scope of the invention as defined in the appended claims.
I claim:

1. As an article of manufacture, a fitted sheet comprising unitary top, side, end, and bottom portions, said top portion having rectilinear side and end marginal crease lines at its sides and end connected at corners of the top portion by arcuate margins corresponding to arcuate corners of a mattress, the end portion of the sheet having integral gusset portions at the lateral margins thereof which gusset portions are longer at the lower than at the upper margins thereof and with a slanted edge connecting the upper margin to the lower margin, the side portions of the sheet having bottom ends extending normal to the longitudinal axis of the sheet, the upper margins of said gusset portions being secured to the arcuate corner portions of said top portion, the lower margins of said gusset portions being secured to the arcuate corner and side edges of said bottom portion to help provide an end pocket for engaging a mattress, the slanted edges of said gusset portions being connected to the bottom ends of said side portions to complete the mattress engaging pocket and connect the side portions to the rest of the sheet by an extensible pocket provided by the gusset portions.

2. As an article of manufacture, a fitted sheet comprising unitary top, side, end, and bottom portions, said top portion having rectilinear side and end marginal crease lines at its sides and end connected at corners of the top portion by arcuate margins corresponding to arcuate corners of the mattress, said bottom portion having similar arcuate corners, the end portion of the sheet having gussets at the lateral margins thereof which gussets are longer at the lower than at the upper margins thereof and with a slanted edge connecting the upper margin to the lower margin thereof, the side portions of the sheet having bottom ends extending at least substantially normal to the longitudinal axis of the sheet, the lower margins of said gussets being secured to the side edges of said bottom portion to help provide an end pocket for engaging a mattress, the slanted edges of said gussets being connected to the bottom ends of said side portions, and the upper margins of said gussets being secured along the arcuate corners of the top portions, to connect the side portions to the rest of the sheet by an extensible pocket provided by the gussets.

3. As an article of manufacture, a bed sheet including a top, a bottom, end portions and a pair of side portions, means securing the edges of said bottom portion to the lower part of said end portion to provide a pocket for engaging a mattress having a depth at the end of the mattress no greater than the thickness of the mattress, said end portion having right angle triangular shape end portions extending around a corner in the sheet into the side portion of the sheet as operatively positioned with the hypotenuse of such section extending downwardly and forwardly of the sheet, the rear edge of said side portions of the sheet extending downwardly and forwardly of the sheet and being secured to the hypotenuse of said end section of said end portion whereby excess material is provided in the side portions of the sheet adjacent said end portion when engaging a mattress.

4. A fitted sheet as defined by claim 2 in which all of the portions are normally disposed in a flat plane to facilitate ironing and may be held in shape to provide a pocket by separable fasteners secured to their adjacent margins.

5. A fitted bed sheet for use over a mattress having rounded corners, said sheet comprising a top panel, a pair of side panels, at least one end panel, and a flap integral with said end panel for underlying an end of the mattress, said top panel having rectilinear side and end margins corresponding to rectilinear margins of the mattress and meeting arcuate corner portions of radius corresponding to corners of the mattress, the end panel terminating at said arcuate corners in tabs of width equal to the depth of the mattress and of length at least equal to the depth of the mattress, said flap for underlying said mattress being equal in width at its free margin to the width of the top panel with its side margins curved to provide arcuate corners corresponding in shape to the corners of the top panel, the curved corners of the top panel and those of the flap meeting the top and bottom margins of the tabs of the end panel and being secured thereto throughout their arcuate extent to provide a pocket smoothly conforming to the corners of the mattress, said side panels being of such depth as to permit to be tucked under the mattress.

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