July 24, 1962 M. E. RICHTER 3,045,260

FITTED BED SHEET

Filed June 20, 1960

Fig. 1

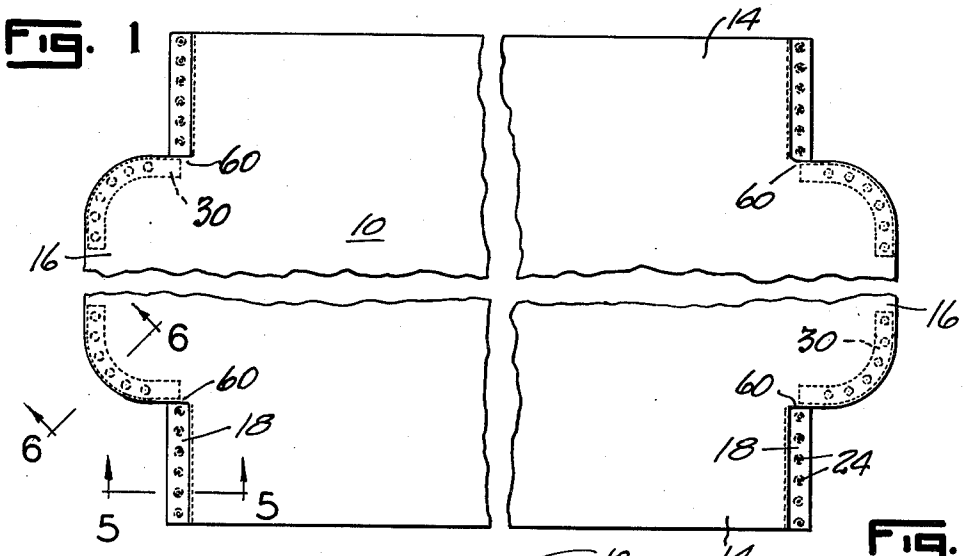


Fig. 3

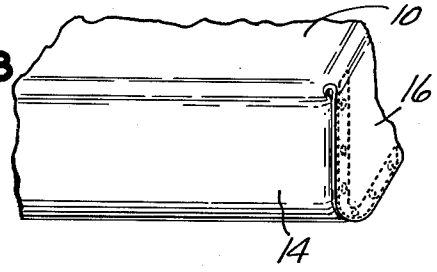


Fig. 4

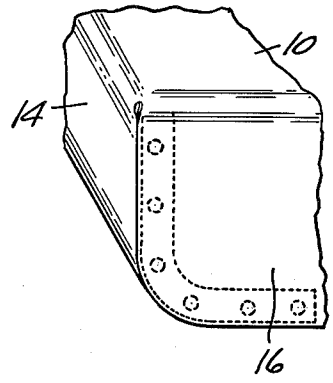


Fig. 2

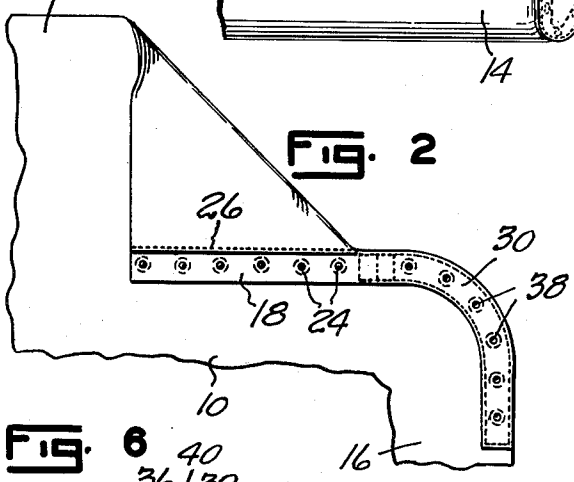


Fig. 7

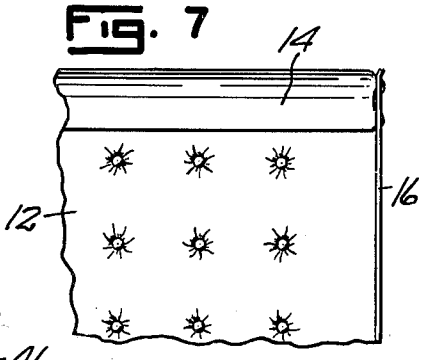


Fig. 6

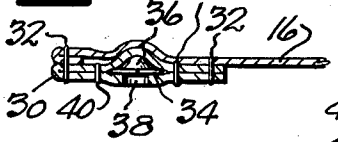


Fig. 8

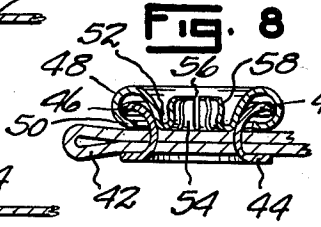
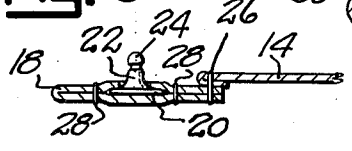


Fig. 5



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United States Patent Office 3,045,260 Patented July 24, 1962

3,045,260

FITTED BED SHEET

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Filed June 20, 1960, Ser. No. 37,481
7 Claims. (Cl. 5—334)

This invention relates to improvements in fitted bed sheets.

The primary object of this invention is to provide a bed sheet adapted to fit snugly and removably upon a mattress, having opposed marginal portions thereof extending vertically along opposed edges of the mattress and turned under the mattress and secured to the ends of other opposed marginal portions extending along other opposed edges of the mattress, and wherein the ends of the marginal portions are detachably connected so that the sheet may be spread flat for laundering or dry cleaning.

A further object is to provide a fitted bed sheet having notched corners, wherein the notches are bound by tapes carrying separable fastener elements adapted to interengage, and wherein one of said tapes is curved so as to accommodate anchorage thereto of another margin of the notched portion of the sheet folded to follow its contour and thereby provide a portion underlying a margin of a mattress.

A further object is to provide a fitted bed sheet which can be extended flat for laundering, ironing and application to a mattress, and which can be manipulated by interconnection of marginal depending parts thereof to assume mattress-fitting form while applied upon a mattress in a manner requiring minimum exertion and minimum manipulation and lifting of a mattress to effect the desired fit of the sheet upon the mattress and underlap of some marginal portions of the sheet with respect to the mattress.

Other objects will be apparent from the following specification.

In the drawing:

FIG. 1 is a fragmentary top plan view of the sheet;

FIG. 2 is an enlarged fragmentary bottom plan view of a corner portion of the sheet with a part thereof folded to expose the fastening means;

FIG. 3 is a perspective view of a corner portion of the sheet applied to a mattress and viewed from the side thereof;

FIG. 4 is a fragmentary perspective view of a corner portion of the sheet applied to a mattress as viewed from the end thereof;

FIG. 5 is an enlarged fragmentary detail sectional view taken on line 5—5 of FIG. 1 and illustrating the male part of a snap fastener secured at a marginal portion of the sheet;

FIG. 6 is an enlarged fragmentary detail sectional view taken on line 6—6 of FIG. 1 and illustrating the mounting of the female part of a snap fastener;

FIG. 7 is a fragmentary bottom plan view of a mattress illustrating the application of my improved fitted sheet thereto; and

FIG. 8 is a detail sectional view similar to FIG. 6 and illustrating a modified embodiment of the invention.

Referring to the drawing which illustrates the preferred embodiment of the invention, the numeral 10 designates a substantially rectangular fabric sheet or covering which may be formed of linen, percale or any other suitable fabric, and which is of a size larger than a mattress 12 to which it is to be applied. The sheet 10 is notched at each of the four corners thereof so as to provide a pair of substantially rectangular narrow elongated marginal side flaps or panels 14, each of a width preferably slightly exceeding the thickness of a mattress 12, and a pair of marginal end flaps or panels 16 which

are preferably of a width substantially equal to the thickness of the mattress 12. Flaps 16 are preferably characterized by rounded outer free corners, as best seen in FIGS. 1 and 2. The notches are preferably spaced such distances from adjacent notches that the longitudinal flaps or marginal portions 14 will be of a length slightly greater than the length of the mattress 12, and the length of the end flaps 16 or marginal portions 16 will preferably be substantially equal to the width of the mattress 12.

A tape 18 mounting separable fastener elements or snap or slide fasteners is stitched or sewn along each end of each marginal sheet portion 14, for example, in the manner illustrated in FIG. 5. As shown in FIG. 5, the tape 18 mounts the male part of a snap fastener having a base disk 20 from the center of which projects a stud 22 having a spherical head portion 24. The tape 18 is preferably of double thickness, being folded upon itself and stitched to the sheet marginal portion 14 at 26 adjacent the free margins of the folded tape. Stitching 28 interconnects the portions of the tape around the base 20 of the fastener to anchor the same in desired position. The arrangement is such that the length of the marginal sheet portions 14, including the width of the tapes 18, and the spacing between the fastener elements at opposite ends of marginal portions 14 will be greater than the length of a mattress by an amount which preferably is slightly greater than the combined widths of the two tapes 18. In the preferred arrangement, the fasteners will preferably be oriented so that the heads 24 thereof project upwardly when the sheet is laid flat with its top surface uppermost, as illustrated in FIG. 1.

A tape 30 is sewn or secured to each end of each of the marginal sheet portions 16. Each tape 30 is folded to double thickness with its folded edge outermost, and preferably is stitched at its inner and outer margins lengthwise thereof at 32 to the end of a marginal portion 16 to extend full width thereof and around the curve between the end and side edges thereof and to extend a short distance along the free side edge of the marginal sheet portion 16, as clearly shown in FIGS. 1 and 2. The tape 30 receives between the folds thereof the disk 34 of a female separable snap fastener having a central socket portion 36 provided with an open mouth with which registers an opening 38 in the tape. Stitching 40 interconnects the opposed parts of the folded tape 30 to form a socket surrounding each fastener part 34, as illustrated in FIG. 6. The tape 30 is secured to the face of the sheet which is positioned lowermost when marginal portion 16 is extended flat from the central portion. Thus the sockets of the snap fasteners and the openings 38 in the tape 30 communicating therewith face downwardly when the sheet is laid flat with its top surface uppermost.

It will be understood that the construction of the snap fasteners herein described is illustrative only, and that fasteners of other constructions may also be used as found suitable. Thus, separable fastener members may be of any conventional construction including snap fasteners in which each of the separable parts thereof is in turn formed of multiple parts clinched together and located at opposite faces of a mounting fabric. For example, as illustrated in FIG. 8, a female socket member is mounted on tape 42 folded on itself. An annulus 44 bears against one face of the tape and has a plurality of prongs 46 equally spaced around its inner margin and extending perpendicularly therefrom to pierce or impale the tape 42. At the opposite face of the tape 42 is formed a socket member comprising a disk 48 having a marginal return bend 50 defining an annular socket to receive the terminal portions of the prongs 46. The member 48 is shaped to provide an annular groove 52

therein and a substantially cylindrical central socket member **54**. Part **54** is provided with a plurality of slits **56** therein defining tongues and with an inturned lip or margin **58**. The parts **54**, **56**, **58** serve to define a socket member for a mating male fastener member similarly formed of two parts anchored and interlocked upon a tape, as well understood in the art.

The margins of the portions **14** and **16** of the sheet between the ends of the tapes **18** and **30** may be hemmed, if desired, or may have a selvage edge. In the flat form of the sheet, as illustrated in FIG. 1, the only portions thereof at which it is folded upon itself occur at the points **60** at the inner parts of the notches. Thus when the sheet is positioned in inverted relation as illustrated in FIG. 2 with an end of each part **14** folded, as shown in FIG. 2, the tape **18** will lie substantially flat and form substantially a continuation of the tape **30**.

In use, the sheet is applied upon mattress **12** in centered relation thereto with the flaps **14** and **16** normal to the adjacent edges of the mattress and falling freely downwardly alongside the adjacent edges of the mattress, that is, the flaps **14** lie alongside the longitudinal edges of the mattress, and the flaps **16** lie alongside the end edges of the mattress. Inasmuch as the flaps **16** are of a width substantially equal to the thickness of the mattress, the end flaps **16** hang flat along the ends of the mattress. Thereupon the separable fastener parts at any given corner of the sheet upon the tapes **18** and **30** can be engaged or interlocked. It will be observed that the portion of the tape **30** which is uppermost, as seen in FIGS. 3 and 4, will be substantially vertical and straight and that the bend therein will occur adjacent the bottom of the tape and the mattress. Thus the interconnection of the separable fastener parts may proceed progressively from the top toward the bottom of the mattress and, in doing so, will define a clear-cut sharp corner extending around the corner of the mattress. As the snap fasteners at the bend of the tape **30** are interlocked, the lower free margin of the flap **14** will be folded inwardly under the bottom of the mattress to a slight extent. Inasmuch as the flaps **14** extend along the sides of the mattress, it is a simple matter for the user to tuck the lower free parts of the flaps **14** under the mattress for the full length of the mattress.

The separable fasteners are all located at the vertical corners of the mattress and, therefore, are readily accessible for manipulation and for connection and disconnection thereof. At the same time the lapping portions of the mounting tapes connected by the separable fasteners extend generally in the planes of the opposite ends of the mattress and, hence, are not seen or visible at the sides of the mattress. This produces a smooth and attractive appearance of the corners of the sheet with minimum bulging or other conditions which would detract from the appearance of the sheet as applied.

It will be apparent that the sheet may be removed and applied readily and with minimum requirement for lifting of the mattress inasmuch as the part which is folded under or overlaps the mattress is narrow. Also, it will be apparent that, when the separable fasteners are released, the sheet will fold flat except for the slight folds at **60**, and this readily facilitates washing and ironing of the sheet.

While the sheet has been illustrated and described as being notched at all corners to accommodate fitted forming thereof, it will be understood that it may be notched at one end only, if that is desired.

While the preferred embodiment of the invention has been illustrated and described, it will be understood that changes in construction may be made within the scope of the appended claims without departing from the spirit of the invention.

I claim:

1. A fitted bed sheet comprising a central portion and side and end flaps shorter than said central portion, the adjacent edges of said flaps extending perpendicularly when said flaps lie in the same plane, said end flaps being narrower than said side flaps and having rounded free corner portions, and separable fastener means carried by the ends of said flaps and the rounded portions of said end flaps for anchoring the adjacent ends of said flaps in lapping relation with the flaps extending perpendicular to said central portion and to each other and with the free longitudinal margins of said side flaps folded inwardly.

2. A fitted bed sheet as defined in claim 1, wherein said separable fasteners are mounted on tapes sewn to said flaps with said fasteners facing oppositely when said sheet lies flat.

3. A fiitted bed sheet as defined in claim 1, wherein said fastener means constitute snap fasteners.

4. A bed sheet adapted to fit upon a mattress, said sheet having a central portion and side and end marginal portions whose adjacent edges extend substantially perpendicularly to define corner cut-outs, said side marginal portions being wider than said end marginal portions and said mattress, said end marginal portions having rounded free corner portions, the marginal portions at said cut-outs and at said rounded corner portions overlapping, and separable fastener means carried by said over-lapping portions for releasably interconnecting adjacent marginal portions of said sheet at the corners of the mattress with the portions of said side marginal portions which are secured to the rounded corner portions of said end marginal portions infolded to underlap said mattress.

5. A bed sheet as defined in claim 4, wherein said end marginal portions are of a length substantially equal to the width of said mattress and said side marginal portions are of a length greater than the length of said mattress and the fasteners at opposite ends of said side marginal portions are spaced apart a distance greater than the length of said mattress.

6. A bed sheet adapted to fit upon a mattress comprising a substantially rectangular fabric sheet having V-shaped notches at its corners to define side and end marginal portions, one pair of opposed marginal portions being of a width greater than the thickness of said mattress and longer than the adjacent edges of said mattress, the other pair of marginal portions being of a width substantially equal to the thickness of said mattress and of a length substantially equal to the length of the adjacent edges of said mattress and having rounded free corner portions, and means detachably securing the end margins of said first named marginal portions to the end margins and the ends of the free side margins of said other marginal portions at said rounded corner portions.

7. A bed sheet as defined in claim 6, wherein the interconnected margins of said marginal portions overlap and said first marginal portions are folded to underlap said mattress, said marginal portions being adapted to lie flat when said securing means are released.

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