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Goldberg

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[54] **HEAT BARRIER TEXTILE MATERIAL**

[76] Inventor: **Irving Goldberg,** 5 Windham Rd., Rockville Centre, N.Y. 11570

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[21] Appl. No.: **384,049**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 305,670, Nov. 13, 1972, abandoned.

[52] **U.S. Cl.** ..... **5/345 R;** 5/355

[51] **Int. Cl.**[2] **A47C 23/00;** A47C 27/00

[58] **Field of Search** .... 5/345, 347, 354, 355, 345 R

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Primary Examiner—Robert L. Wolfe
Assistant Examiner—Andrew M. Calvert
Attorney, Agent, or Firm—Watson, Leavenworth, Kelton & Taggart

[57] **ABSTRACT**

An article of manufacture is disclosed comprising a mattress edged with a novel heat barrier mattress tape edging. A method is also disclosed for manufacturing a heat barrier fabric containing at least about 50% by weight of filament yarn and, optionally, the balance spun yarn, the filament yarn and spun yarn being made from a synthetic fiber forming polymer such as a poly(ethyleneglycol terephthalate), where the loft of such fabric is the ratio of the average thickness of the fabric to the average combined thickness of such yarn and is from about 2.5 to about 4.5 to one and said fabric is from about 6 to about 20 ounces per square yard based on said poly(ethyleneglycol terephthalate). Spun yarn is used in the preferred embodiment. A process is also disclosed for making combustible mattress filling materials less susceptible to combustion when used adjacent to said fabric. The preferred embodiments comprise such fabric as a substantially woven mattress tape edging article of manufacture and the use of such tape edging in the aforementioned mattresses. In a further embodiment a non-synthetic fiber is used in the spun yarn such as cotton.

10 Claims, 4 Drawing Figures

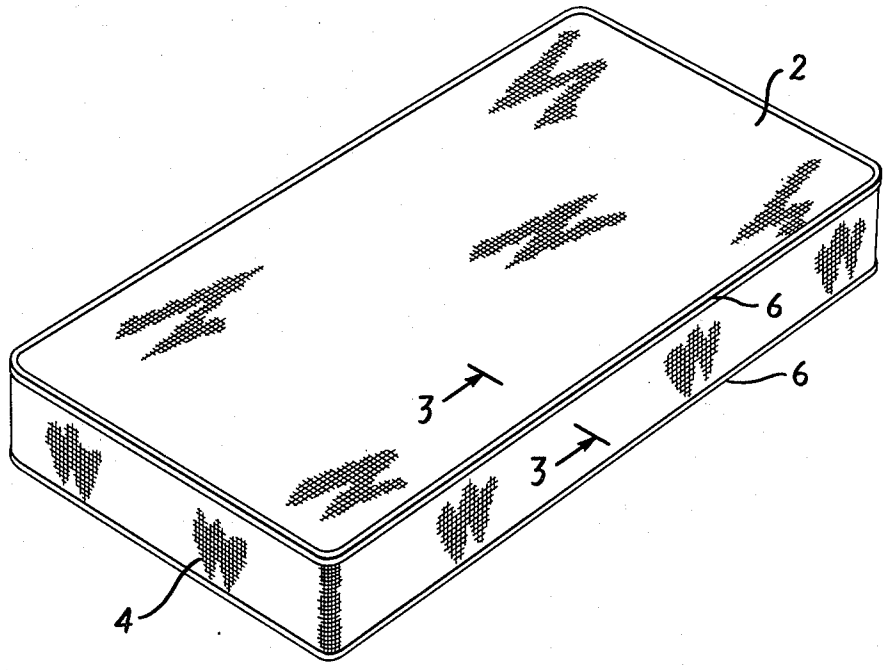
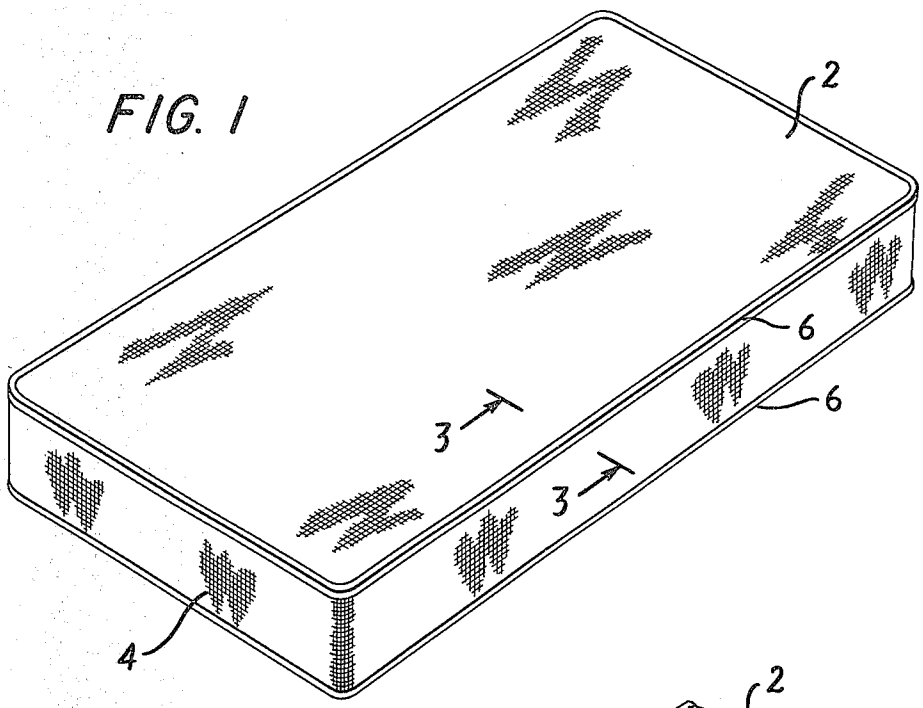


FIG. 1



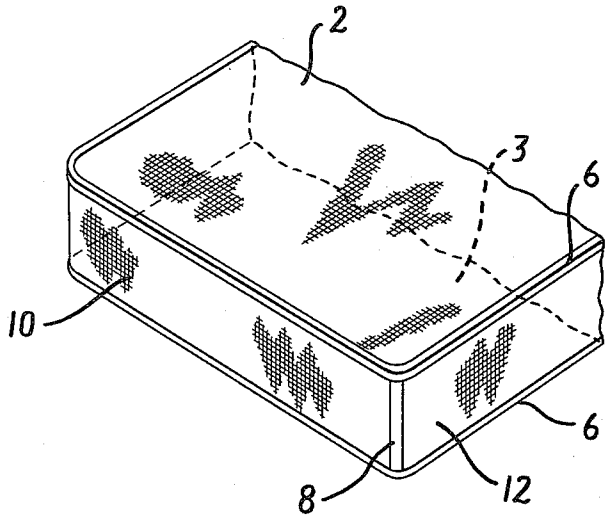


FIG. 2

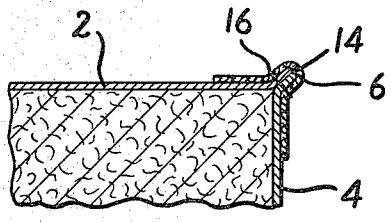


FIG. 3

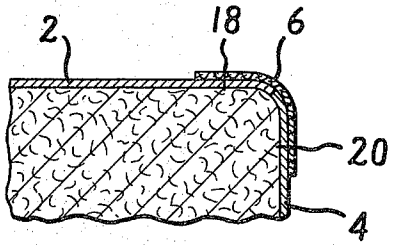


FIG. 4

HEAT BARRIER TEXTILE MATERIAL

This application is a continuation in part of U.S. patent application, Ser. No. **305,670** filed Nov. **13, 1972** now abandoned.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention relates to an article of manufacture comprising a mattress edged with a novel heat barrier mattress tape edging and a method for manufacturing a heat barrier fabric having at least about **50%** by weight mono-filaments or filament yarn and, optionally, the balance spun yarn where the filaments are made from synthetic fiber forming polymers such as poly(ethyleneglycol terephthalates), polyamides and polyacrylonitriles. The loft of the fabric which is defined as the ratio of the average thickness of the fabric to the combined average thickness of the monofilaments or yarn from which it is made is about **2.5** to about **4.5** to one. Where the fabric is made of poly(ethyleneglycol terephthalate), the weight of the fabric is from about **6** to about **20** ounces per square yard. The invention also relates to a process for making combustible mattress filling materials less susceptible to combustion by placing the fabric adjacent or next adjacent to such mattress filling materials. In a preferred embodiment, the fabric comprises a substantially woven mattress tape edging and the use of such tape edging in the construction of mattresses.

In a further embodiment a non-synthetic fiber is used in the spun yarn such as cotton.

2. Prior Art

Flame retardant textiles have been made by coating and/or impregnating textile materials with various flame retardant compositions such as halogenated hydrocarbons optionally in combination with phosphorous compounds and/or antimony oxide. Additionally, surface coatings have been employed containing aluminum or similar flake or powder pigment. Flame retardant materials have also been added to the spinning solutions of "dope" of natural or synthetic polymers prior to passing through a spinnerette in a filament manufacturing process employed for the manufacture of synthetic fibers. These flame retardant materials are incorporated throughout the entire fiber and offer the advantage of flame retardation in the finished textile material without employing subsequent treating operations such as impregnation or coating. Even though this additional step of coating or impregnating can be eliminated, in many instances, depending on the flame retardant material added to the spinning solution or dope, the ultimate cost of the fiber obtained is increased and, additionally, physical properties such as elongation and tensile strength might be sacrificed in order to obtain the desired flame retardant characteristics.

SUMMARY OF THE INVENTION

An article of manufacture is disclosed comprising a mattress edged with a novel heat barrier mattress tape edging. A method is also disclosed for manufacturing a heat barrier fabric containing at least about **50%** by weight of filament yarn and, optionally, the balance spun yarn, the filament yarn and spun yarn being made from a synthetic fiber forming polymer such as a poly(ethyleneglycol terephthalate), where the loft of such fabric is the ratio of the average thickness of the fabric to the average combined thickness of such yarn and is from about **2.5** to about **4.5** to one and said fabric is from about **6** to about **20** ounces per square yard based on said poly(ethyleneglycol terephthalate). Spun yarn is used in the preferred embodiment. A process is also disclosed for making combustible matress filling materials less susceptible to combustion when used adjacent to said fabric. The preferred embodiments comprise such fabric as a substantially woven mattress tape edging article of manufacture and the use of such tape edging in the aforementioned matresses.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of the mattress of the invention horizontally edged with the novel mattress tape edging fabric of the invention.

FIG. **2** is cut away section of said mattress having a mattress tape edging fabric of the present invention along the horizontal edge, as well as at least one verticl edge thereof, in accord with the invention.

FIG. **3** is a view in section taken along the line **3—3** of said mattress tape edging used to join a vertical and a horizontal mattress ticking member at an angle to one another with a common joining means.

FIG. **4** is a view in section of said mattress tape edging used to join a vertical and a horizontal mattress ticking member at an angle to one with two separate joining means and is an alternate embodiment of the feature shown in FIG. **3.**

DETAILED DESCRIPTION OF THE INVENTION

The present invention provides an article of manufacture comprising a mattress edged with a novel heat barrier mattress tape edging. The invention also relates to a method for manufacturing a heat barrier fabric, by which it is meant a fabric that *inter alia* may be placed over flammable cotton mattress filling material and when a lighted cigarette is allowed to burn its full length, when such lighted cigarette is placed directly on said fabric, the cotton mattress filling material will not burst into flame. The fabric is especially suitable for the manufacture of said tape edging.

The article of manufacture as shown in FIG. **1** comprises a mattress having a bottom and top mattress ticking member **2** (bottom view not shown) and a side mattress ticking member **4** meeting to substantially form an edge and a mattress tape edging **6** adjacent said edge and joined to said edge. The edge formed by member **2** and member **4** is such that said members may be separate or one continuous member folded at right angles to form the vertical and horizontal sides of the mattress. The mattress ticking is made of any fabric known in the art suitable for application in this type of construction such as cotton, rayon, cellulose acetate, polyamides, poly(ethyleneglycol terephthalates) and polyacrylics and various blends thereof. In one embodiment, both the mattress and tape edging may be made of the tape edging fabric as described herein. The mattress of FIG. **1** may be stuffed with any conventional mattress filling material such as cotton batting, foam materials or fibrous materials which are described in more detail herein.

FIG. **2** shows a cut away view of FIG. **1** and further illustrates the use of the tape edging fabric in not only the horizontal edge **6,** but also the use as at least one vertical tape edge **8** where said vertical mattress ticking member **10** meets with vertical mattress ticking member **12** to form a vertical edge. Again, the edge formed

by vertical member **10** and vertical member **12** is such that said members may be separate or a continuous member folded at right angles to form the vertical edge. Member **3** is the bottom horizontal mattress ticking which is not shown in FIG. **1.**

FIG. **3** is a view in section taken along the line **3—3** of the horizontal member **2** joined to the vertical member **4** by abutting said members to form a face-to-face abutment at **14** over which and adjacent to the tape edging **6** is placed and through which joining means such as thread **16** is passed to form a sewn edge.

FIG. **4** shows an alternative construction of FIG. **3** in which horizontal member **2** is joined to vertical member **4** by means of separate joining means as, for example, threads **18** and **20** sewn respectively through one edge of said tape edging **6** and said horizontal member **2** and the opposite edge of tape edging **6** and said vertical member **4.**

The fabric of the invention consists essentially of at least about **50%** by weight of mono-filaments or filament yarn and, optionally, the balance spun yarn, by which it is meant that the use of spun yarn is optional in the construction of the fabric, or stated otherwise, filament yarn is from about **50** to **100%** by weight and the amount of spun yarn is from **0** to about **50%** by weight. In one embodiment, the fabric contains from about **50** to about **75%** by weight of mono-filaments or filament yarn, preferably filament yarn, and the balance from about **50** to about **25%** by weight of spun yarn. Preferably, the filament yarn is employed in an amount (on a weight basis) equal to or greater than the spun yarn.

The mono-filaments, filament yarn and the spun yarn are preferably made from at least one synthetic fiber forming polymer from the group of poly(ethyleneglycol terephthalates), polyamides, polyacrylonitriles and polyolefins such as polypropylene, polyethylene, and the various art known copolymers of each. The fabric of the invention may also be made from blends of these materials such as a blend of poly(ethyleneglycol terephthalate) and polyacrylonitrile filament and/or spun yarn.

The mono-filaments may be defined as substantially continuous fiber or a fiber that is no longer than **6** inches which is not cut into staple fibers where the staple fibers may be anywhere from about **1½** inches to about **6** inches in length. Filament yarn is made up of several strands of mono-filaments or staple fibers laid side by side to form a single strand. Monofilaments also include so-called texturized processed yarns, wherein a mono-filament is treated in a fashion so that a continuous mono-filament has spun yarn characteristics which are obtained, for example, by exploding the mono-filament. When monofilaments of this type are employed, they may be used as a substantial equivalent of the spun yarn.

A spun yarn is obtained from mono-filaments or filament yarn by cutting the mono-filaments or filament yarn into staple fiber lengths of from about **1½** inches to about **6** inches and spun into a single strand. The purpose of this process is to maximize the volume of the strands of staple mono-filaments or staple filament yarn.

The preferred polymeric material used in the mono-filaments, filament yarn or spun yarn comprises a poly(ethyleneglycol terephthalate).

The fabric of the invention may be woven, non-woven (e.g., felted, needle punch or laminated fabric) or knit fabric; however, a first preferred embodiment comprises a woven textile, preferably in which the strands of filament yarn run in the machine direction of weaving or the warp of the woven textile, whereas the spun yarn, if employed, is used in the weft or cross-machine direction of the textile. A second preferred embodiment comprises a woven textile in which the filament yarn is used in the weft of the textile and the spun yarn is used in the warp of the textile. The invention, however, also comprises the use of any combination of filament yarn and spun yarn in the warp and/or weft of the textile material such as alternate strands of filament yarn and spun yarn or every third or fourth strand employed either in the warp or the weft being either a filament yarn or spun yarn, so long as the aforementioned percentages of filament yarn to spun yarn are ultimately employed in the fabric.

Additionally, the warp and weft of the fabric may be anywhere from about **90°** to one another to about **10°** to about **15°** to one another. Non-woven fabrics may also be made in a fashion so that the strands used therein intersect one another at the aforementioned angles.

In the substitution of spun yarn for filament yarn (filament yarn for the purpose of the present definition also including mono-filaments and texturized processed yarns, i.e., exploded mono-filaments), the bulk of each has to be taken into account by reference to manufacturing standards for both in order to substantially maintain the construction of the fabric. Thus, filament yarn is supplied according to the following standard:

100	Denier	—	44,520	yards per pound
200	"		22,300	"
300	"		14,900	"
400	"		11,161	"
500	"		8,092	"
600	"		7,441	"
700	"		6,378	"
800	"		5,580	"
900	"		4,960	"
1,000	"		4,464	"
1,100	"		4,059	"
1,200	"		3,720	"
1,300	"		3,434	"
1,400	"		3,189	"
1,500	"		2,976	"

Spun yarn is supplied according to the following standard:

1/1	(1)	Single	—	840 yards per pound
2/1	(2)	"		1,680 "
3/1	(3)	"		2,520 "
4/1	(4)	"		3,360 "
5/1	(5)	"		4,200 "
6/1	(6)	"		5,040 "
7/1	(7)	"		5,880 "
8/1	(8)	"		6,720 "
9/1	(9)	"		7,560 "
10/1	(10)	"		8,400 "
11/1	(11)	"		9,240 "
12/1	(12)	"		10,080 "
13/1	(13)	"		10,920 "
14/1	(14)	"		11,760 "
15/1	(15)	"		12,600 "
16/1	(16)	"		13,440 "
17/1	(17)	"		14,280 "
18/1	(18)	"		15,120 "
19/1	(19)	"		15,960 "
20/1	(20)	"		16,800 "

Thus, in order to maintain the weight of the fabric, when substituting a 900 denier filament yarn for a 1,000 denier filament yarn, the ratio for the substitution would be nine 1,000 denier strands for every ten 900 denier strands. When substituting a 10 single yarn for a 20 single yarn, 10 strands of 10 single would be employed for every 20 strands of 20 single.

Additionally, filament yarns of different deniers may be used in the same fabric or one filament yarn can be substituted entirely by a different denier filament yarn. Spun yarn can be similarly employed; however, in order to substantially maintain the same construction of weave of the fabric, the substitution or replacement cannot be made on a strand-for-strand basis, in some instances.

As an example, in a woven fabric having 45 ends of filament yarn per inch in the warp and 24 picks of spun yarn per inch in the weft (one pick equals two strands), substitution of the filament yarn for the spun yarn can be made on a strand-for-strand basis, but it is preferably made in a manner to maintain the construction of the fabric. Accordingly, such a fabric would have 45 strands of filament yarn per inch in the warp and 24 picks per inch in the weft where there is 100% substitution by a filament yarn having substantially the same average thickness as the spun yarn being substituted and proportionately the same substitution of filament yarn where less than all of the spun yarn is replaced by the filament yarn. However, fewer picks would be used in substituting in this manner with thicker yarn. Replacement of filament yarn by spun yarn would be similarly made. These guidelines are also applicable to non-woven and knit fabrics.

The substitution of strands of filament yarn for spun yarn, taking into account denier and singles, can be anywhere in the range from about 1:2 to about 5:1 and in a manner to substantially maintain the construction of the fabric.

The preferred embodiment of the present invention comprises a fabric employing from about 600 to about 1,300, especially about 800 to about 1,200 denier filament yarn and about 6 to about 20, especially about 8 to about 16 single spun yarn.

When the fabric is made of poly(ethyleneglycol terephthalate) mono-filaments, filament yarns or spun yarns, the fabric weight will be anywhere from about 6 to about 20 ounces per square yard, or from about 7 to about 13 ounces per square yard. These weights will also vary proportionately based on the degree of substitution of other synthetic polymeric materials mentioned herein for the poly(ethyleneglycol terephthalate), taking into account any differences in specific gravity of the polymer being substituted as compared to that of the poly(ethyleneglycol terephthalate), as well as the differences in weight due to the substitution, if any, of mono-filaments, filament yarn or spun yarn for one another. As an example of the latter, substitution of filament yarn for spun yarn will increase the weight of the fabric where the substitution is made in a manner to maintain the construction of the fabric. Thus, where a woven fabric has 45 ends or strands per inch of filament yarn (1,000 denier) in the warp and 24 picks (where one pick equals 2 strands) of 10 single spun yarn in the weft, replacement of all of the spun yarn with 24 picks of filament yarn will increase the weight of the fabric by about 30%.

Optimum heat barrier properties are procured with a fabric having a degree of loft which is obtained by a three dimensional pattern in the surface of the fabric which may be obtained by a weave having a pronounced texture, a decorative pattern such as a waffle-like design or the like. This pattern is woven and/or embossed into the fabric. In the preferred fabric, which is a woven fabric, a ribbed pattern or a series of ribs are woven into the textile at any angle to the fabric edge, the preferred rib pattern being a twill, which is a series of ribs at an angle to the edge of the fabric where such angle is not substantially a 90° angle such as an angle from about 10° to about 80°.

The degree of loft is a function of the ratio of the average thickness of the fabric to the combined average thickness of the mono-filaments or yarns. The combined average thickness of the mono-filaments is determined by adding the average thickness of each different type of mono-filament and yarn and dividing this sum by the number of types of monofilaments, filament yarn and spun yarn. As an illustration, a fabric employing 10 single yarn (about 0.23 mm. average thickness when measured with a micrometer) and 1,000 denier filament yarn (about 0.18 mm. average thickness when measured with a micrometer) is not an acceptable heat barrier when woven to an average thickness of about 0.40 mm. (measured with a micrometer). The combined average thickness of the filament yarn and spun yarn is:

$$\frac{0.23 \text{ mm.} + 0.18 \text{ mm.}}{2} = 0.205 \text{ mm.}$$

The ratio of the average thickness of the fabric to the foregoing combined average thickness is about 2:1 and is not acceptable. Using the same spun yarn and filament yarn in a fabric woven to an average thickness of about 0.60 mm. and a fabric woven to an average thickness of about 0.80 mm., an acceptable heat barrier is obtained. Thus, the preferred degree of loft for the fabric of this invention is such that the ratio of the average thickness of the fabric to the combined average thickness of the mono-filament or yarn is from about 2.5 to about 4.5:1 or from about 3 to about 4:1. Comparable lofts are obtained for knit and non-woven fabrics.

The preferred fabric is woven and about 38 to about 65 ends or strands and preferably about 40 to about 50 ends or strands of filament yarn are used per inch in the warp, and about 18 to about 50 picks and preferably about 20 to about 30 picks of spun yarn (where one pick is equal to 2 strands of yarn) are used per inch in the weft when employing about 600 to about 1,300 denier filament yarn and about 6 to about 20 single spun yarn. In one preferred embodiment the foregoing parameters are used in a woven fabric in which the filament yarn is substantially in the warp.

A woven fabric has been obtained using a Jacob Mueller needle loom known in the art, said fabric being made to have outstanding heat barrier properties by employing about 45 ends of poly(ethyleneglycol terephthalate) filament yarn (1,000 denier) per inch in the warp and 24 picks (one pick equals 2 strands) of 10 single poly(ethyleneglycol terephthalate) spun yarn per inch in the weft. This fabric is also woven in a twill pattern. Fabric obtained in this manner is manufactured to the following specifications:

144 yds. × 11/16 inch, 25–30 oz. total weight ± 20%
144 yds. × 7/8 inch, 35–40 oz. total weight ± 20%
144 yds. × 1¼ inch, 45–55 oz. total weight ± 20%

The "total weight" of the fabric in the foregoing data refers to the weight of a 144 yarn length of fabric having the width set forth above.

A second preferred embodiment comprises a fabric in which the weft is substantially filament yarn and the warp is substantially spun yarn. This fabric is woven and about 38 to about 65 ends or strands and preferably about 25 to about 60 ends or strands of spun yarn are used per inch in the warp and about 18 to about 50 and preferably from about 12 to about 25 picks (where one pick is equal to 2 strands) of filament yarn are used per inch in the weft when employing about 600 to about 1300 denier filament yarn and about 6 to about 20 single spun yarn.

The foregoing woven fabric in which the weft is substantially filament yarn and the warp is substantially spun yarn is easier to weave on a needle loom such as the aforementioned Jacob Mueller needle loom since there is less wear and tear on the machine caused by abrasiveness and strength of the filament yarn. Additionally with this type of fabric the problem of fraying has also been substantially eliminated. Fraying detracts from the appearance of the woven fabric. When filament yarn is used in the warp fraying results and a fabric having a somewhat unsightly appearance is obtained. This fabric when constructed as a mattress tape edging is also easier to use in existing machinery employed for sewing mattress tape edging to mattresses as compared to the mattress tape edging previously described in which the filament yarn is employed substantially in the warp of the fabric. The reasons for this are not known; however, it has been observed that problems of feeding the fabric of the second mentioned preferred embodiment into such machinery have been substantially eliminated. Problems such as jamming, pulling, breakage and wear of machinery, gathering, tearing or fraying of fabric have been substantially avoided by the second preferred embodiment.

In the embodiment where spun yarn is used in the warp of the woven fabric, it has been observed that by employing a single spun yarn the resultant fabric contains an inordinate amount of "pills", which is a term used in the art to denote gathering of the fiber along a very short length thereof so that the fiber in the woven fabric appears to be thicker in some sections than in others. This phenomenon is avoided and an overall improvement in the speed of weaving is obtained by using a multiple-ply spun fiber instead of the single-ply spun fiber previously described. Anywhere from a 2-ply to about 6-ply yarn is considered for purposes of this invention to be within the scope of a multiple-ply spun yarn. However, as a matter of convenience and cost 2-ply yarns are most effectively used in making the woven fabric.

The 2-ply yarn is prepared by spinning 2strands of single yarn on textile machinery well known in the art, whereas multiple-ply yarns made of more than 2 plies would be prepared from as many singles as plies would be needed. For example, a 3-ply yarn would be made from 3 strands of single yarn, and so forth.

Multiple-ply yarn used in this respect is supplied according to the standards as set forth herein for spun yarn with the exception that the yardage per pound is reduced in direct proportion to the number of plies. Thus, a 20/1 single spun yarn at 16,800 yards per pound when converted into a 2-ply yarn is identified in the art as a 20/2 two-ply yarn at 8,400 yards per pound. Thus, with the table previously given for spun single yarn, the yardage per pound of a multiple-ply yarn can be easily determined.

Fabric is manufactured according to the second mentioned preferred embodiment on the aforementioned Jacob Mueller needle loom by employing for example about 44 ends of 20/2 ply poly(ethyleneglycol terephthalate) spun yarn per inch in the warp and 16 picks (one pick equals 2 strands) of poly(ethyleneglycol terephthalate) filament yarn (1,000 denier) per inch in the weft. This fabric is also woven in a twill pattern and is manufactured according to the following specifications:

144 yds. × 11/16 inch 18–25 oz. total weight ± 20%
144 yds. × 7/8 inch 25–33 oz. total weight ± 20%
144 yds. × 1¼inch 42–52 oz. total weight ± 20%

The total weight of the fabric in the foregoing data refers to the weight of a 144 yard length of fabric having the width set forth above.

The fabric when supplied as a woven tape edging may vary in width anywhere from about one-half of an inch to about two inches. Modification of both of these particular fabrics within the foregoing ranges and guidelines, as well as the fabric per se falling within the foregoing ranges and description, comprise the preferred embodiments of the present invention.

In a further embodiment a non-synthetic fiber is used in the spun yarn in whole or in part; i.e. the spun yarn can be made from a blend of the natural fiber and a fiber made from a synthetic fiber forming polymer as previously described, or alternately the spun yarn can be made entirely from a non-synthetic fiber such as cotton. Non-synthetic fibers include cotton, wool, silk and those made from regenerated cellulose, such as rayon. However, cotton is preferred because of the low cost, availability and results obtained.

A method is also provided for making combustible mattress filling material less susceptible to combustion comprising the step of placing adjacent to said mattress filling material the aforementioned fabric, especially the most preferred embodiments of such fabric. These and other mattress filling materials in this embodiment include cotton batting, horse hair, sisal and synthetic materials commonly used as mattress filling materials, e.g., synthetic polymeric foams such as polyurethane foam and rubber latex foam.

In addition to the mattress filling materials, the aforementioned process and article are applicable to any materials that ordinarily would support combustion to some degree which are employed in the manufacture of mattresses or bedding as those terms are commonly employed and understood.

The expression "adjacent" in the foregoing sense is intended to include the placement of the fabric next adjacent or immediately adjacent to such mattress filling materials or their equivalents, as well as adjacent to such mattress filling materials or their equivalents, as in the case where an intermediate layer such as a mattress ticking material, optionally backed for example with polyurethane foam, is employed in between the fabric

of the invention and a cotton mattress filling material. The expression adjacent is also intended to include the foregoing immediate or intermediate relationship wherein the fabric is interposed between such mattress filling material or the equivalents thereof and a potential or actual source of ignition such as a lit cigarette. Where the fabric is employed, for example, as a tape edge used in mattress construction, the expression adjacent is intended to include a construction embodying said immediate or intermediate relationship, e.g., where the tape edge is structurally incorporated onto the mattress by sewing, adhesives or any other means known in the art.

It has been found that a fabric as defined herein, and especially the most preferred embodiments of such fabric, will withstand conditions such that when a cigarette is placed on such fabric, especially a tape edge woven fabric, the cigarette will burn its full length without causing the ignition of mattress filling material such as cotton batting material placed underneath such tape edging.

Although the invention has been described by reference to one or more embodiments, it is not intended that the novel mattress article of manufacture, fabric or method for making such fabric or method for making such mattress filling materials less combustible is to be limited thereby, but that certain obvious variations are intended to be included within the broad scope and spirit of the following claims.

What is claimed is:

1. As an article of manufacture, a mattress having a vertical surface mattress ticking and a horizontal surface mattress ticking meeting to substantially form an edge, an organic heat barrier mattress tape edging adjacent said edge and joining means securing said tape edging to said edge, said tape edging being made of an organic fabric from at least about 50% by weight of at least one member of the group of mono-filaments and filament yarn, and optionally, the balance spun yarn, said mono-filaments and filament yarn and said spun yarn being made of a synthetic fiber forming polymer selected from at least one member of the group consisting of a poly(ethyleneglycol terephthalate), polyamide, polyacrylonitrile and polyolefin, the loft of said fabric being such that the ratio of the average thickness of said fabric to the combined average thickness of said monofilaments, filament yarn or spun yarn is from about 2.5 to about 4.5:1, the weight of said fabric being from about 6 to about 20 ounces per square yard.

2. The article of manufacture of claim **1** where said fabric comprises a woven fabric of about 50 to about 75% by weight filament yarn and the balance thereof spun yarn, said filament yarn being substantially in the warp of said textile and said balance of spun yarn being substantially in the weft of said textile, where said filament yarn is about 600 to about 1,300 denier and said spun yarn is from about 6 to about 20 single, said fabric having from about 38 to about 65 ends per inch in the warp thereof and about 18 to about 50 picks per inch in the weft thereof, the weight of said fabric being from about 7 to about 13 ounces per square yard.

3. The article of manufacture of claim **2** where said filament yarn is from about 800 to about 1,200 denier, said spun yarn is from about 8 to about 16 single, said fabric has from about 40 to about 50 ends of filament yarn per inch in the warp and from about 20 to about 30 picks of spun yarn per inch in the weft, said fabric has a ribbed surface and said loft is such that said ratio is from about 3 to about 4:1.

4. The article of manufacture of claim **1** where said fabric comprises a woven fabric of about 50 to about 75% by weight filament yarn and the balance thereof spun yarn, said filament yarn being substantially in the weft of said textile and said balance of spun yarn being substantially in the warp of said textile, where said filament yarn is about 600 to about 1,300 denier and said spun yarn is from about 12 two ply to about 24 two ply, said fabric having from about 38 to about 65 ends per inch in the warp thereof and about 18 to about 50 picks per inch in the weft thereof, the weight of said fabric being from about 7 to about 13 ounces per square yard.

5. The article of manufacture of claim **4** where said filament yarn is from about 800 to about 1,200 denier, said spun yarn is from about 15 to about 22 two ply, said fabric has from about 25 to about 60 ends of spun yarn per inch in the warp and from about 12 to about 25 picks of filament yarn per inch in the weft, said fabric has a ribbed surface and said loft is such that said ratio is from about 3 to about 4:1.

6. The article of manufacture of claim **1** where said vertical mattress ticking meets to form at least one substantially vertical edge, said tape edging being placed adjacent to said vertical edge and joining means securing said vertical edge and said tape edging adjacent to said vertical edge.

7. The article of manufacture of claim **2** where said synthetic fiber-forming polymer comprises a poly(ethyleneglycol terephthalate).

8. The article of manufacture of claim **3** where said synthetic fiber-forming polymer comprises a poly(ethyleneglycol terephthalate).

9. The article of manufacture of claim **5** where said synthetic fiber-forming polymer comprises a poly(ethyleneglycol terephthalate).

10. The article of manufacture of claim **6** where said synthetic fiber-forming polymer comprises a poly(ethyleneglycol terephthalate).

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