# BETTER BUYING

# Springs and Mattresses

by

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Sleep is necessary for good health, vitality, good disposition, a healthy appearance—all of which contribute to happy and successful living. Comfort is the first requirement for restful sleep. In addition a bed should be noiseless or as nearly so as possible; it should be big enough for large people, and the covers should be light and warm.

The test for comfort is the number of comfortable sleeping positions a person can have in the bed and the ease with which he can shift from one position to another.

The spring and mattress are the foundation of a good bed. They must hold the body level and at the same time conform to every curve.

The body finds rest by change of position during sleep. There must be no lumps or depressions, so that the sleeper is limited to one or two positions. The bed should be soft enough to feel comfortable. If it is too soft, it "hugs" the sleeper, making a close contact between the body and bed. This overheats the body, producing perspiration and dryness of the skin which causes discomfort, particularly during warm weather. If the bed is too hard and unyielding, circulation is retarded. This makes it necessary to change positions frequently. Too many changes cannot be made unconsciously, and so one awakens.

A comfortable bed will not sag or sway from side to side. It must give a feeling of security and not one of sinking into a seemingly bottomless cavity.

## BEDSPRINGS

The first consideration for a good bed is the bedspring. A good mattress does not give good service without a good foundation to support it.

A good spring:

1. Will hold the mattress level and not permit sagging.
2. Will not sway easily from side to side.

3. Has desired up and down resiliency.
4. Has a strong frame with parts well assembled which do not slide or slip.

There are two types of bedsprings: fabric and coil (open coil and box springs).

## FABRIC SPRINGS

A fabric spring is made of inelastic steel ribbon tape, links, wires, or cables fastened to a frame at the head and foot by helical (spiral) springs. In time this construction will sag if only from the stretching of the helical springs. Fabric springs cannot conform to the contour of the body, and so they give poor sleeping comfort. They are light in weight, and therefore easy to handle. This type of spring is low in price, but may cost as much as the open coil spring, since its life is so short replacements make it expensive. In addition, a good mattress goes to pieces on sagging springs.

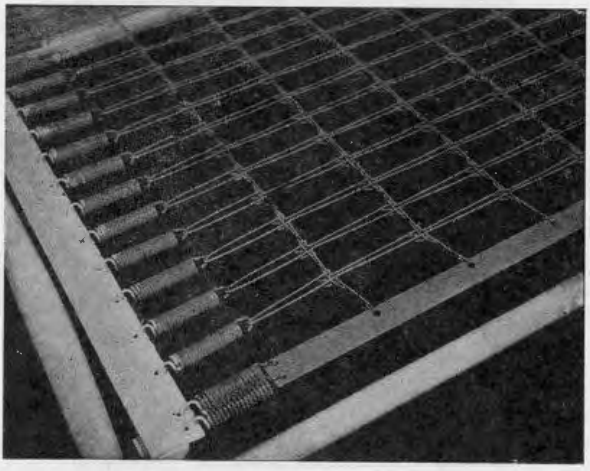

**Fig. 1. A kind of fabric spring where wires are linked together and to the heavy side rail. Helical springs join the wires to the end of the frame. Note the heavy side rails are supported by double helicals at each end. This spring will assume a hammock-like shape and give little sleeping comfort.**

## COIL BEDSPRINGS

There are two types of coil bedsprings; open coil and box springs.

Coil bedsprings make for comfort when they are:

1. Correctly designed
2. Made of right materials
3. Well constructed
4. Used with a suitable mattress

**Design.** When coils are fastened together in an upright position at the top in a manner to permit individual action of the coils, the bedspring will conform to the shape of the body resting on it. This is true of **all** open coil springs fastened together with wire helical springs, and of **some** box springs. This type of design gives best wear and most comfort.

Fig. 2. Helicals or helical coils are the coils of small diameter used to connect the large upright spiral coils on the top surface of the springs.

Look for adequate anchorage of the springs at the sides that will avoid swaying. This is provided in different ways. A spring may be fitted with a device called a "stabilizer." The springs may be anchored with a center border wire, or the outer rows of spiral coils may be fastened at the tops to heavy borders. Spiral coils

turning in both right- and left-hand directions overcome the tendency that springs have to lean or develop a side sway.

**Materials.** Be sure that the wires are of a high-grade carbon steel, tempered after the bedspring is assembled. Ninety-nine coils of No. 10, 11, or 12 gauge wire are generally accepted as standard. The greater the number of turns of wire in a coil, the more resilient and durable it will be; providing the size and quality of wire used in the coils is uniform. The open coil spring foundation is best when it is made of steel slats joined to a rigid steel frame. A similar steel frame may be the top border; or a lighter frame, or a heavy border rod or wire may be used. The bedsprings should have a baked-on enamel or other rust-proof finish.

**Construction.** Note any tendency to a side sway. Examine the method or device used for stabilizing the spring, to find out the probability of noise and of durability. Test by actually lying and rolling on the bed. Examine the way the parts are assembled. Watch for any sliding or slipping of wires, or unnecessary noise. The edges should be smooth and made so that rivets do not show.

**Combination with a suitable mattress.** Solid mattresses of cotton, hair, kapok or latex need more resilient springs than innerspring mattresses. The springs must also give the proper surface support needed for each type of mattress. Open coil springs are suitable for the solid types—cotton, hair and kapok. For innerspring and latex mattresses there must be no large open spaces in the spring surface. Either there must be upholstering, platform or convolute-soil type top to prevent the mattress from sinking down into the tops of the spiral coils. Otherwise, the smaller, more sensitive coils of innerspring mattresses will break or become sprung. The platform top consists of narrow steel bands or a woven wire top over all the coils. The convolute-coil top is made by closing the top of the coils with extra turns of wire.

Try different kinds of mattresses on the coil spring chosen. Select the most comfortable combination that suits the individual idea of sleeping comfort, keeping in mind the amount of money available.

## OPEN COIL BEDSPRINGS

Types:

1. Those made entirely of wire.

2. Those having a steel foundation framework and coils held together on the top surface with wire ties.
3. Those having a steel foundation framework, but held together at the top of the coils by small helical springs.

All-wire upright coil springs will not stand up under hard usage. They are too light in construction and often of inferior quality of wire.

Coil springs, constructed so that the upright coils are held together on the top surface with wire ties, are more durable than the all-wire type (described above). When wire ties are used, they are apt to break under severe strain. If a really comfortable combination of mattress and bedsprings of this type is desired, a more expensive, thick, resilient mattress is needed which will probably offset any saving on the price of this spring. The mattress must contribute the characteristics of conforming to the contour of the body since the spring cannot do this. This type of spring has possibilities of side sway and of the border wire being drawn in, causing the development of a permanent sag.

Open coil bedsprings of the third type where the upright coils are held together at the top by small helical springs offer good value whether the springs are single-deck or double-deck. The small helical springs which tie the top of the coils together are not only more durable than wire ties, but permit up and down action of each individual, upright coil. This contributes an important feature to a good bed, that of conforming to the shape of the body. Resilient mattresses, of long staple cotton, kapok, hair, or a good innerspring construction used with this type of spring, give a very comfortable bed. A comfortable and inexpensive bed can be had by using a mattress of long staple cotton felt, three or four inches thick, on this type of bedspring.

## SINGLE-DECK BEDSPRINGS

The coils in a single-deck bedspring are connected only by one layer of helical springs placed at the top surface of the coils.

## DOUBLE-DECK BEDSPRINGS

In a double-deck spring there is a section halfway between the top and bottom of the coils which connects one coil to another. The construction is superior when the coils at this center section

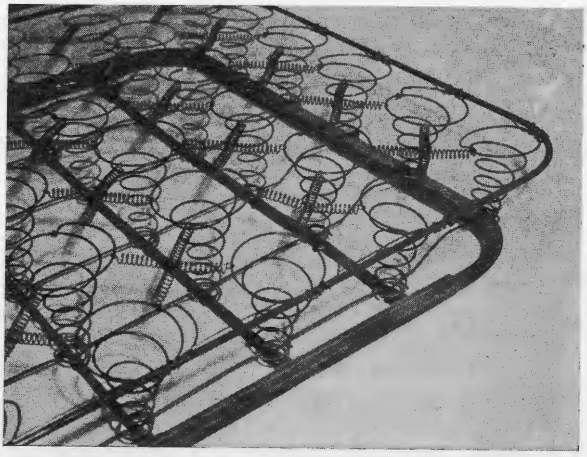

Fig. 3. A single-deck coil bedspring with iron frame at bottom and heavy wire border at top. Note there is no center section as in Figs. 4 and 5. The upright coils are connected only by one layer of helical springs, placed at the top surface of the coils.

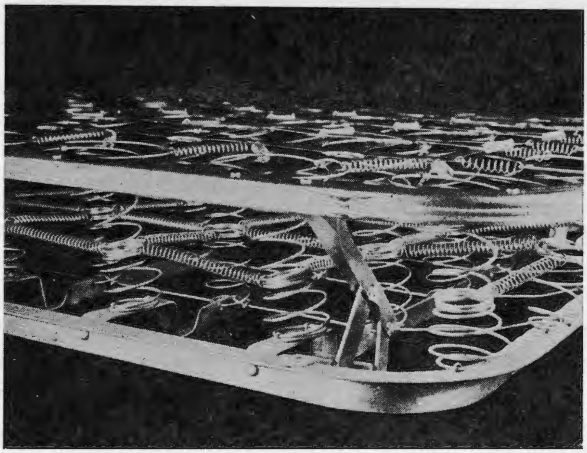

Fig. 4. A double-deck spring. Note that the bottom of the coils are attached to steel slats. Halfway between the top and bottom of the coils are small helical springs connecting each coil. Helical springs also connect the coils with each other in a diagonal fashion at the top surface of the springs. The top and bottom frame is made of angle iron, fashioned to give smooth edges. Notice the stabilizer used to prevent swaying. This type of spring gives more resiliency than the spring in Fig. 5. Narrow steel bands on the top surface are woven together to form a platform top.

are held together by helical springs rather than wire crimps. In the best double-deck springs these small helical springs and the border coils are attached to a rod surrounding the entire spring, midway between the top and bottom frames. This type of spring gives maximum resilience and is especially comfortable for the heavy person. In most cases double-deck springs are more expensive than the single-deck type.

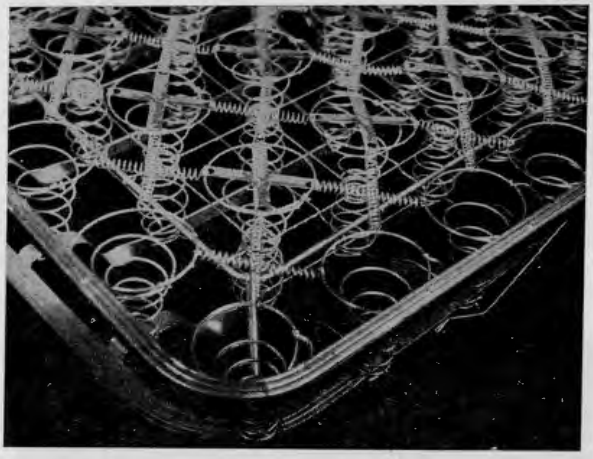

Fig. 5. Another type of double-deck spring construction where the center section has coils held together by wire instead of helical springs, as in Fig. 4. The helical coils make a more resilient spring. Notice that the stabilizer is a different construction than the one in Fig. 4.

## COVERED COIL SPRINGS

The covered coil spring is often used to mislead people. Padding and ticking are placed around an open coil spring to make it appear as a boxspring. Make sure of the type of springs you are buying.

## BOX BEDSPRINGS

Highly skilled hand workmanship and the quality of the material required for a good box spring makes it higher in price. Low-priced box springs may be inferior to open coil springs which cost no more and often much less. In a box spring, 50 to 70 coils are set onto slats of wood or steel. The coils are held in an upright position with heavy hemp cord, that ties one coil to another, to the

border wire or bamboo, and to the foundation frame. Springs that are cross tied eight times are more durably constructed than those tied fewer times. In tying, the coils are drawn down to about one-third their original height. The top of the bedspring is upholstered with cotton felt or hair, and the top and sides are covered with cloth.

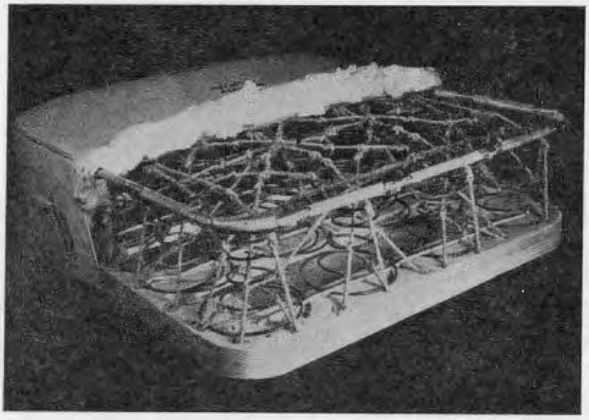

Fig. 6. The coils in better boxsprings are hand-tied to each other, to the frame, and to the border by special cords. Note the springs are cross tied eight times; also the rattan edge, the burlap cover over the springs and the layers of cotton felt used for upholstery.

Because of the method of construction, a box spring tends to be firm and unyielding. If the coils in a boxspring are very closely tied down, a **resilient,** thick mattress is necessary to give body comfort, such as an innerspring construction mattress or one made of high grade, South American tail-and-mane hair.

Boxsprings with coils not too closely compressed are softer and tend to conform to the shape of the body. On such a spring—oftentimes only a pad two or three inches thick of a very resilient material such as hair, hair and wool, long linter cotton or staple cotton is all that is needed to give comfort.

**Thicker resilient mattresses** add to the luxurious ease of the box bedspring. Solid, very thick mattresses, made of poor quality hair or short linter cotton should never be used, for they will detract much from the comfort contributed by the spring.

A well constructed boxspring comes nearest to being a noiseless spring.

Box springs covered with "dyed in the yarn" good quality, blue and white ticking will outwear fancy damask-woven covering and will cost less.

A vacuum cleaner helps in the problem of keeping a boxspring clean. A spring cover that can be removed and washed will also aid considerably in keeping the spring free from dust.

Test the comfort of a boxspring by actually resting upon it with the mattress that is to be used.

## REPAIR OF SPRINGS

Sagging springs are sometimes corrected by tightening wires connecting the coils or by replacing the coils. If the springs have rusted in places and have discolored the mattress, a coat of enamel applied to the spring will prevent further damage.

Boxsprings may be repaired by retying springs that have sprung out of position.

# MATTRESSES

A good mattress is one that is comfortable to the person who is to use it. It must conform to the contour of the body, give adequate support, and be able to adjust to the changing positions and parts of the body.

Points to look for in buying a mattress:

Comfort—Resiliency (Power to rebound when compressed)
Buoyancy (Power to support weight)
Durable Construction
Good Quality Materials
Sanitary
Warmth
Ease in Handling
Guarantee of Manufacturer
Correct Size

A mattress, to be comfortable, should be chosen to suit the person who is to use it. A small, light-weight person rests well on a soft, cushiony, yielding foundation (consider both springs and mattress). The moderate-sized person will rest better on a firm foundation, while the large heavy-weight person will sleep better on a stiff foundation that supports weight. Where the climate is hot and humid, a harder type of mattress rather than a softer one should be used. This allows the sleeper to rest more **on the top** than **down in** the mattress, thus reducing warmth.

Information on the quality of the mattress may be secured from salesmen, labels, and from the buyer's own investigation. The buyer should learn to recognize quality materials and good workmanship in each type of mattress. Look at enough mattresses to know which type is preferable. The cut-out samples prominently displayed in bedding departments can be investigated and should be explained by salesmen. It is important to select a model within the type that actually suits the individual idea of sleeping comfort and the amount of money available. Be sure to actually lie down on the mattress which has been placed on the type of spring on which it is to be used.

There are two general types of mattresses—the solid mattress of animal or vegetable filling and the inner spring construction mattresses made of a coil spring unit covered with upholstery.

Materials Used for Filling Are:

Cotton
Innerspring Unit
Hair
Wool
Vegetable fibers
Latex

## COTTON

Cotton is the most widely used fiber for mattress fillings. There are two kinds of cotton:

(a) **Staple cotton** which is the fiber first removed from the seed by ginning.

(b) **Linters** are shorter fibers, darker in color and somewhat more oily than staple cotton. There are many grades of linters varying from the dark, short, oily fibers which adhere closely upon the seed to the fiber almost as long and nearly as white and clean as staple cotton.

The better cotton mattresses are filled with "felted" staple or long cotton linter. In felting, the fibers are carded, the dust removed, and the fibers interlaced into thin web-like layers, many of which, one upon another make the felt or bat. Bats of desired thickness are covered with ticking and tailored.

Felted cotton mattresses vary as to comfort and durability, depending largely upon the quality of cotton used. Linters too short for felting are blown into the tick. The opening is closed and the mattress is tufted. Blown, unfelted, low-grade cotton linter mattresses pack, lump badly and become very uncomfortable. A good felted cotton mattress is springy. It packs eventually, but does not lump. When it is frequently aired, sunned, and beaten, packing is prevented and the fibers recover a great deal of their original resiliency. A long staple felted cotton mattress can be cleaned, sterilized, and remade several times.

In less expensive mattresses a good rule is to favor a cotton mattress whenever its price range overlaps that of another type of mattress.

## INNERSPRING CONSTRUCTION

The general principle of construction of the innerspring mattress is a spring coil inside an upholstered surface. The spring

unit is responsible for the resiliency and buoyancy, and the padding provides the soft luxurious surface.

There are two types of innerspring units:

1. Cloth-pocketed coils in which each individual wire coil is encased in a muslin or burlap pocket and held in an upright position by the cloth, by rows of cord or tying.

2. All metal construction in which each individual wire coil is held in an upright position at the top and bottom by wire ties or helical spring ties.

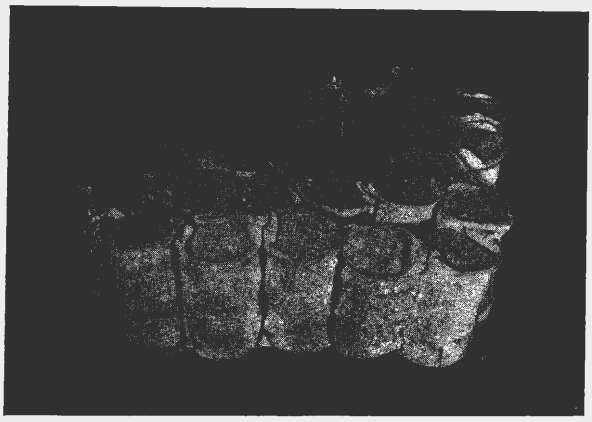

Fig. 7. Cloth pocket construction. The coils are placed in a continuous string of sheeting pockets, each pocket containing one coil.

Much of the comfort of an innerspring mattress depends upon how sensitively the mattress can conform to the contour of the body resting on it. In both types of spring construction there are units which conform to the shape of the body and others which do not. Examination of the unit will help one to determine whether individual action of the coil is possible.

For durability the unit should be made of a high-carbon (0.50 to 0.65 per cent carbon content) spring, steel wire, properly tempered to insure necessary spring action and to prevent the development of a permanent sag in the spring unit and broken edges. Lacquered wire, baked-on enamel, or other metallic finish, is a protection against rusting.

Other factors, such as size and guage of wire, depth and shape of coil, contribute or detract from the comfort and durability. These can be tested only in a general way. Good spring units are resilient; when pressed together, they do not sink down suddenly, but maintain a buoyant resistance. They give the mattress a firm supporting quality and at the same time contribute to the feeling of surface softness. Weak springs may seem very comfortable at first, but soon lose their elasticity.

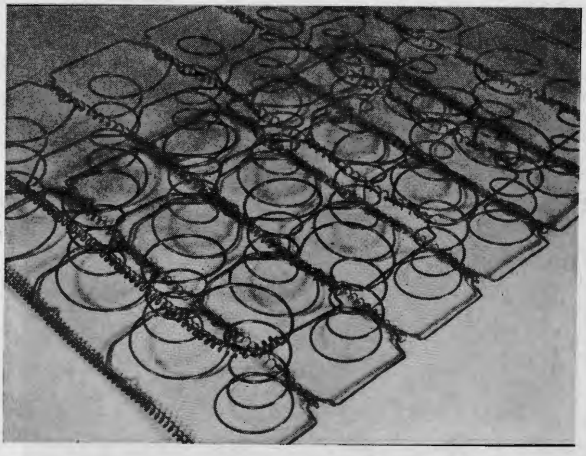

Fig. 8. All metal construction unit for an innerspring mattress. The coils are bound together into one huge spring unit by wire, in this instance, helical wires are used.

A type of unit often called a balanced spring construction consists of individual coils locked into a continuous unit. Each left hand coil is mated with a right hand one which equalizes tension and strain and prevents the mattress from becoming lopsided. Sometimes the edge coils are made of heavier steel wire, or they may be ordinary coils that are attached to the side upholstery in order to prevent the mattress developing a side sag.

In some instances side edge coils may be cylindrical while the other coils in the mattress are hourglass in shape.

Over and under an innersprung unit is placed upholstery material. Cross section samples of the mattress will show the many different layers of various materials. Next to the spring is placed burlap which prevents the upholstery material from working

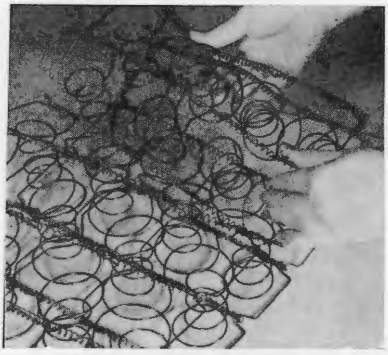

Fig. 9. This is the same spring unit as in Fig. 8. Note the ends of each coil are locked into helical ties so they cannot slip. The coils are spiraled in opposite directions in each row to eliminate swaying. The hinge action of the spring unit permits the unit to be rolled or turned without damage to the spring unit.

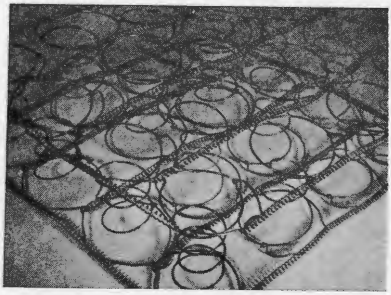

Fig. 10. Notice the coil ends are knotted to the coil and the coils are staggered as they are fastened through the helicals to prevent shifting of the coils when one is in action. The coil wire is bent near the knot so it cannot slip in the helicals.

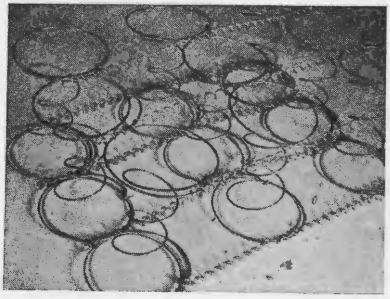

Fig. 11. There is nothing on the coil to prevent its slipping in the helicals. Note that the helicals do not have as many spiral turnings as in other units. There is also an evidence of fewer coils used in the unit.

Fig. 12. Metal crimps fasten the heavy paper cord to the springs. The springs are apt to slip and the paper cord break. This spring unit has very poor and short lasting qualities. It is not recommended in any mattress at any price.

through to the springs. Next to this burlap is placed a layer of springy material. Hair would be desirable, but is scarce and rarely used. Sometimes a more expensive mattress will have hair with an overlaying of lamb's wool. In most mattresses sisal is used because it is cheaper. It is a tough vegetable fiber and acts as an insulator. Sisal is not as resilient as hair. The quality of padding may be judged in the same way as solid mattress fillings. Long staple

felted cotton or felted long linter cotton is preferable to cotton linters. A rule of thumb test for padding is to press down on the mattress with your hands. If the springs can be felt through the padding, be wary.

## FEDERAL SPECIFICATIONS

Federal specifications are a guide in selecting mattresses. For cloth-pocketed innerspring mattresses they are:

Cylindrical coils of high-carbon steel wire 0.06 inch in diameter.

Coils about 2½ inches in diameter.

Both ends of coils turned in.

Not less than three nor more than 3½ turns per coil, measured on the free spring, not including end or bearing convolutions.

Coils should be four inches in height when in the pockets.

Each row of coils should nest between adjacent rows in a manner such as to cause overlapping of the coils, and thus provide against any open spaces between pockets.

A cord should fasten the rows together at the ends and go through the pockets across the pocketed coils in rows spaced not more than nine inches apart.

Federal specifications for all-wire spring units with free-end coil construction are:

Transverse rows of alternating right-hand and left-hand coils connected with a helical wire in such a manner as to prevent slipping.

The free end of the coil shall be anchored within the helical without the use of any accessory locking device.

Cylindrical coils form the two outside rows of coils. High-carbon steel wire of not less than 0.085 inches is used.

All other coils shall be hourglass shape of not less than 0.079 inch diameter high-carbon steel wire.

Not less than 5½ turns per coil, counting from end to end of coil.

Coils shall be 5 inches high.

Helicals of 0.045-inch diameter high-carbon steel wire of 4 or more turns per inch, except the end helicals which shall have 7 turns per inch.

The ends of helicals should be turned in to make a smooth finish.

Tempered after assembling parts.

Baked-on enamel finish to protect against rusting.

Federal specifications for all-wire spring unit with knotted coil construction:

Transverse rows of coils connected with helicals in such a manner as to prevent slippage and to permit a free hinge action when the mattress is folded or rolled.

Or, units of not more than four coils to the unit joined to neighboring units of coils in a manner to prevent slippage and to allow free hinge action.

Cylindrical coils form the two outside rows.

All other coils shall be hourglass shape.

Coils made of not less than .079-inch diameter high carbon steel wire. 3½ turns or convolutions per coil including only the portions between the knots of the coils.

Coils shall be 4¾ inches high.

Helicals of 0.045-inch diameter high carbon steel wire and shall have four or more turns per inch.

Where helicals are used in the construction, the individual spring coils shall be offset with a straight portion passing through not less than six turns of the helical.

All knots on the coil shall be turned down and the ends of the helicals shall be turned in.

Other Federal specifications for mattresses—a double mattress, about 54" x 74":

6½ inches thick.

12 to 12½ pounds of felt layer on each face (minimum)

4 ventilating openings on each side.

3 ventilating openings on each end.

70 to 71 pounds is minimum weight of cloth-pocket type.

79 to 81 pounds is maximum weight of cloth-pocket type .

51 to 53 pounds is minimum weight of all-wire type.

58 to 60 pounds is maximum weight of all-wire type.

30 to 31 (minimum) coils in each lengthwise row in cloth pocket type.

22 to 24 (minimum) coils in each crosswise row in cloth pocket type.

660 coils is minimum in cloth-pocket type mattress.

17 to 18 (minimum) coils in each lengthwise row in all-wire types.

13 (minimum) coils in each crosswise row in all-wire type.

221 coils is minimum in all-wire type mattress.

A mattress, about 39" x 75":

6½ inches thick.

9½ pounds of felt layer on each face (minimum).

4 ventilating openings on each side.

3 ventilating openings on each end.

54 pounds minimum weight.
61 pounds maximum weight.
31 coils in lengthwise rows in cloth-pocket type.
19 coils in crosswise rows in cloth-pocket type.
589 coils is minimum in cloth-pocket type.
42 pounds is minimum weight of all-wire types.
46 pounds is maximum weight of all-wire types.
18 coils in lengthwise rows in all-wire types.
7 coils in crosswise rows in all-wire types.
126 coils is minimum in all-wire type.

Fig. 13. The coils on the right are held in position by strips of burlap fastened to burlap back by metal fasteners. On the left two pieces of burlap material are stitched together in squares which hold the ends of the coils in a pocket. This is a poor construction and will not give service in a mattress.

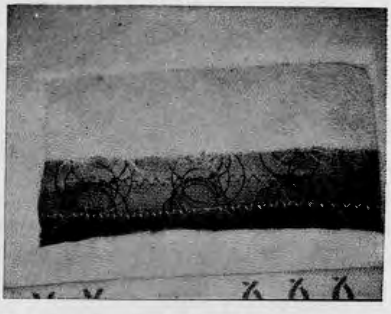

Fig. 14. An illustration of the coil unit in Fig. 11 in a mattress. Burlap is used to prevent the sisal padding from working into the springs. Layers of cotton felt make a soft upholstery.

## HAIR

Only new pure horse hair is satisfactory for a hair mattress and its price is almost prohibitive. Imported pure South American tail and mane horsehair is considered the best. It averages about 18 inches in length.

Hair must be curled, cleaned, and sterilized before it can be used. Imported hair is thoroughly sterilized and inspected by the government before it can enter our ports. Domestic hair is subject to severe cleaning before leaving the packing house. If the hair is overheated or improperly treated, the mattress is unsanitary and undesirable.

Because of the high price of imported horse hair, substitutions such as domestic horsehair, hog, goat, and vegetable fiber for pure horsehair have been made. Hog's hair, being short (averages only a few inches) tends to become lumpy and ball up in a mattress. Its shortness also prevents it from being properly curled. Goat's hair is not only short, but soft. It lacks both resiliency and durability. Vegetable fibers are also used to adulterate hair mattreses. They are a poor quality filling.

A mattress of high-grade horse hair or cattle hair upon a box spring or open-coil spring should give satisfactory sleeping comfort and years of service, provided the mattress is **turned and aired sufficiently.** This type of mattress can be remade as soon as it begins to lose its resiliency. The material never wears out and by frequent renovations it will last indefinitely.

Comfort qualities of hair mattresses of the same grade may vary due to such factors as the tightness with which the mattress is tied down in tufting and the amount of hair in the tick. The mattress should be tried upon the type of spring with which it will be used.

## WOOL

Wool is somewhat less resilient than hair, but it is light, durable and good. Wool mattresses can be remade and commercially mothproofed.

## VEGETABLE FIBERS

Vegetable fibers such as tampico, sisal, jute, coconut fiber, African palm and moss are extremely brittle and have little lasting qualities when used in a mattress.

Kapok is the light fluffy seed fiber found in large hard-shelled pods of a tropical tree. It is naturally very light in weight and resilient. This makes it luxurious in texture, comfortable and easly to handle. It is moisture and vermin proof which adds to its sanitary value. Kapok being a tropical fiber responds as by magic to sunlight and air. With the absence of sunlight, and with continued wear, the fine silky fibers pulverize into dust and roll up into small balls. Kapok requires much sunning and airing to preserve its elasticity and prolong its life. With the very best of care kapok makes a short-lived mattress which will last about ten years.

Fig. 15. Cloth pocketed spring construction where each spring is sewed to adjacent springs at four points. This helps to hold the springs in position and to keep them from breaking through the muslin.

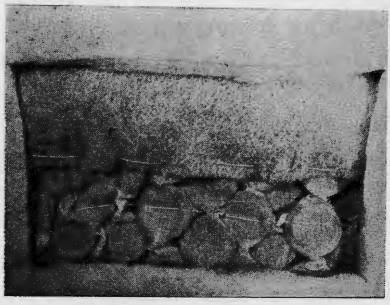

Fig. 16. Another cloth pocket construction where each row of coils nests between adjacent rows so that coils overlap and there are no open spaces between the pockets. Rows of twine spaced not over 9 inches apart hold the springs in position and fasten them at the ends of the row.

## LATEX

Latex is a spongy rubber product made from the whipped milk of the rubber tree. It is buoyant and resilient. It is light and flexible, easily rolled for handling and needs no turning. Its use in mattresses is relatively new so there is little on which to base knowledge or information of comfort and durability. The latex mattress requires a resilient bedspring and one that is built up higher to offset the thinner latex pad.

## TICKING

Plain "dyed in the yarn" woven ticking, such as an 8 ounce blue and white striped ticking will give the best wear for the money. An 8 ounce ticking means that a yard of ticking 32 inches wide weighs 8 ounces. It is a federal specification. There are many other fancy and expensive tickings and sometimes these fade.

## STANDARD SIZES OF MATTRESSES

The size of the mattress should be the same as that of the springs, rather than the size of the bed. The U. S. Bureau of Standards recommends the following mattress sizes:

| | |
|---|---|
| Double bed | 6 ft., 1 in. by 4 ft., 4 in. |
| Single bed | 6 ft., 1 in. by 3 ft., 10 in. |
| Cot | 6 ft., 1 in. by 2 ft., 10 in. |

## WORKMANSHIP

Good tailoring and workmanship are earmarks of quality. They give durability needed in a mattress that sees consistent, everyday service. The finish of the edges, side stitching and tufting are all included in tailoring.

Firm edges prevent a mattress from sagging. Box edges should be built up from the inside. They should be reinforced with quilting cloth or felt, which is either tied or sewed to the ticking. Most desirable of the edges is the imperial edge which is square in shape, and which is held together by four rows of stitching.

Other durable edges are made up with two thicknesses of ticking into which manila or cotton ropes are sewed. An additional precaution is a 5/8-inch herringbone tape stitched to the edging which extends completely around the mattress. A rolled edge should be well filled with cotton and with stitches neatly and uniformly spaced not less than 2 stitches for every 3 inches. The rolled edge on felted staple cotton mattress helps to hold the layers in place and helps to keep the mattress on the spring.

Forty tufts are recognized as a minimum number to keep the filling of a mattress from shifting and lumping. Tufts should be arranged in a diamond pattern on the mattress and should be of twine or tape which is drawn through both sides of the mattress with stitches far enough apart to hold securely and to avoid ripping and tearing of the ticking. Metal strips, rubber or composition buttons are satisfactory for the stitched and knotted ends; cotton tufts are not acceptable according to Federal specifications.

Make sure that ventilators on the sides of innerspring mattresses are not false. They should pass through the entire border from the outside through to the spring section. Each ventilating opening should be fitted with a rust-resisting metal screen of fine mesh.

Handles on the sides make it easier to handle the mattress.

## LABELING

There is no Federal law for mattresses nor a model State law. The only legislative protection a consumer has against deception and inferior quality in pillows, comforters, cushions, and mattresses is from a local or State law-making body. Thirty-six states have such laws, but only a few states enforce the law. Rarely do the

laws agree with each other and none of them requires all the information the consumer should have on the labels. Manufacturers with national distribution usually label their mattresses according to the laws of the more exacting states. Usually there is some type of mattress label on which can be found the "official statement" of the contents of the mattress, the kind of material, whether **new or used**, and the name of the manufacturer. All "new material" is raw material never having been used before. "Used material" means second-hand material of any kind. Some states require sterilization of second-hand materials—others do not.

In the State of Washington there is a labeling law which applies to mattresses, pillows, comforters, upholstered furniture and cushions. This law requires that the percentage or weight of material used and the manufacturer's name be on the tag. Sterilization of materials is required. This law is constantly enforced by the State Department of Health. Collecting samples and making analyses is the job of one full-time employee.

A guarantee is found on some mattresses. The date of purchase should be placed on the guarantee by the merchant and the guarantee kept by the consumer. This is a protection to the consumer.

## CARE OF MATTRESSES

To get good service from a mattress, it must be given good care. It should be turned frequently from side to side, end to end, and over. One person should not turn mattresses alone because of the danger of injury to springs and felted cotton layers when a mattress is folded.

Frequent airing in the sun and beating with a switch or yardstick will freshen the mattress. This helps to keep the cotton fibers fluffy. Removing dust with a vacuum cleaner or stiff brush is also a great aid in keeping the mattress in good condition.

Protectors for mattresses and springs are necessary to keep the mattress free from dust. These can be purchased or made at home. A mattress pad is also a protection from stain and body perspiration. Never sit on the edge of the mattress because it causes it to sag and lose its box-like shape.

For further information secure Extension Bulletin 262 "Bedding and Its Care," from your county extension office or from the

Agricultural Extension Service, State College of Washington, Pullman, Washington.

## REFERENCES


"Requirements of a Good Bed"—M. Attie Souder—The Hotel Monthly Press.

"Uneasy the Head That Lies on a Mattress Label"—Consumers' Guide—April, 1941.

"National Bedding Standards to Protect Against Disease and Fraud"—J. Davis Donovan—Industrial Standardization, November, 1937.

"What Is Inside of Your Mattress." University of Illinois Extension Service.

"Tips on Selecting Mattresses." Oregon State Agricultural College Extension Service by Gladys Whipple Goode.

"Before You Buy a Mattress"—Consumers Guide—May 15, 1940.

Federal Specification V-M-96; Mattresses; Inner-Spring—Supt. of Documents, Washington, D.C., October, 1935.

Commercial Standard CS-54-35; Mattresses for Hospitals. National Bureau of Standards, Department of Commerce, Washington, D.C., September, 1935.

Federal Specification V-M-81; Mattresses; Cotton (felted)—Supt. of Documents, Washington, D.C., October, 1935.

Published and distributed in furtherance of the Act of May 8, 1914, by the State College of Washington, Extension Service, F. E. Balmer, Director, and U. S. Department of Agriculture, cooperating.