

March 7, 1933.

S. COHEN

1,900,802

SPRING MATTRESS

Filed Aug. 4, 1932

2 Sheets-Sheet 1

Fig. 1.

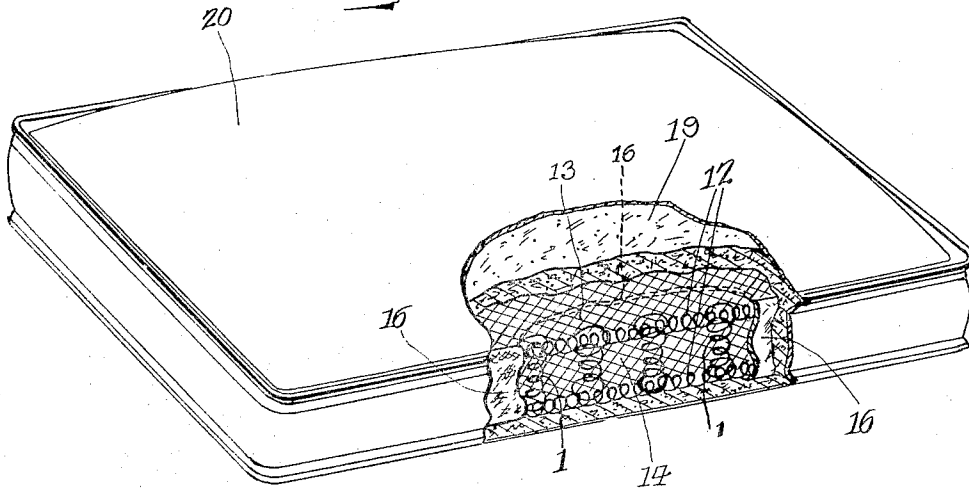
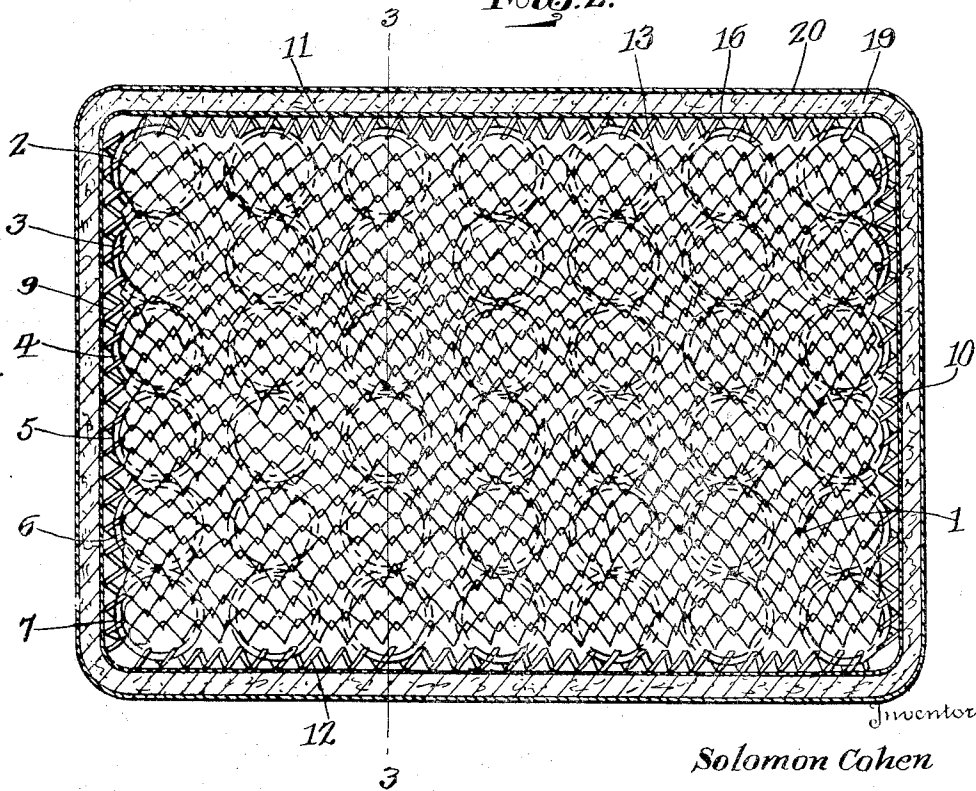


Fig. 2.



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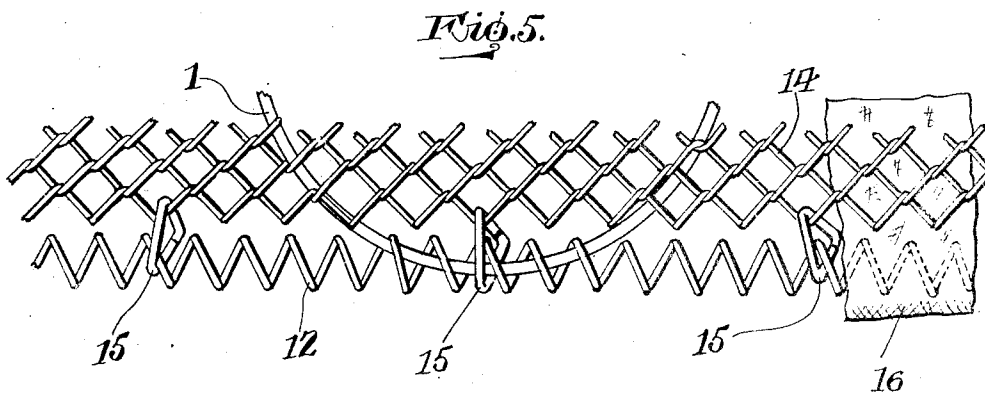
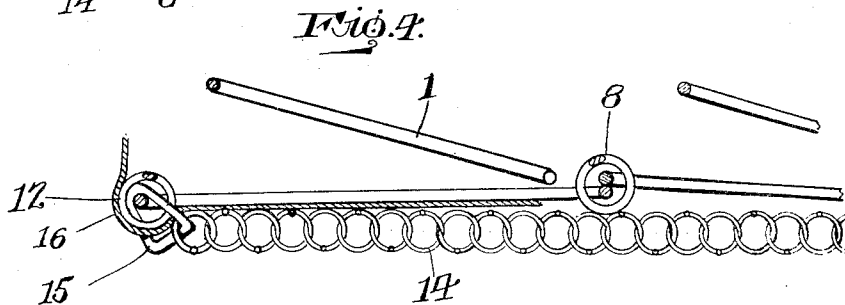
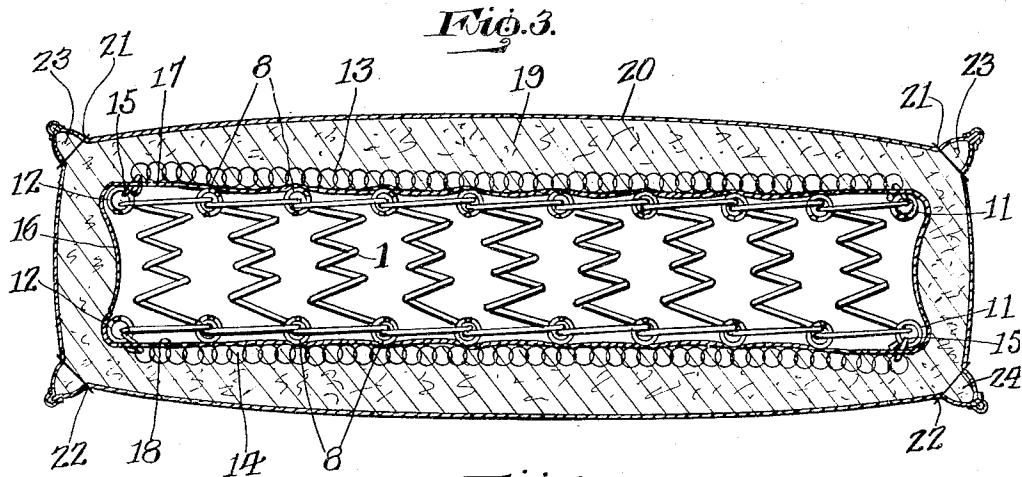
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UNITED STATES PATENT OFFICE

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SPRING MATTRESS

Application filed August 4, 1932. Serial No. 627,505.

This invention relates to a spring mattress and has for its object to provide, in a manner as hereinafter referred to an article of such class so constructed and arranged to provide for double resiliency when used.

A further object of the invention is to provide, in a manner as hereinafter set forth, an article of the class referred to including spaced, opposed resilient sections each consisting of a web of metallic fabric formed from woven spiral wires and cushioning sections of fibrous material extended lengthwise of, bearing against the outer faces of and interengaging with the woven wire sections whereby the cushioning sections are prevented from shifting relative to said other sections.

A further object of the invention is to provide, in a manner as hereinafter set forth, an article of the class referred to including a pair of spaced opposed resilient sections each in the form of a web of woven spiral wires, a spring assembly consisting of rows of connected together double cone springs interposed between said sections, certain of said springs being coupled to said sections, coiled resilient border elements for the spring assembly, and coupling means between the border elements and springs and between the border elements and said sections thereby possessing double resiliency when used.

A further object of the invention is to provide, in a manner as hereinafter set forth, an article of the class referred to including a spring structure possessing double resiliency, and cushioning means encompassing said structure and normally maintained by the latter in extended position.

A further object of the invention is to provide, in a manner as hereinafter set forth, an article of the class referred to formed with a spring structure providing for double resiliency and including metallic webs separated by double cone springs, a fabric casing having opposed walls interposed between said webs and ends of the springs and other walls opposing and arranged outwardly with respect to the body of the springs, and cushioning means op-

posing the top and bottom of said structure and the sides of casing.

Further objects of the invention are to provide, in a manner as hereinafter set forth, a composite mattress which is comparatively simple in its construction, strong, durable, compact, possessing double resiliency, insuring comfort when in use, thoroughly efficient for the purpose intended, readily set up and comparatively inexpensive to manufacture.

To the above ends essentially, and to others which may hereinafter appear, the invention consists of such parts, and such combination of parts which fall within the scope of the invention as claimed.

In the drawings:

Figure 1 is a perspective view, broken away, of a mattress in accordance with this invention.

Figure 2 is a sectional plan.

Figure 3 is a section on line 3—3 Figure 2.

Figure 4 is a fragmentary view in sectional side elevation.

Figure 5 is a fragmentary view in plan.

The mattress includes a core formed of opposed rows of a series of double cone vertically disposed springs. The cones of each spring are oppositely disposed and with the base of a cone at an end of the spring. The springs of one row are arranged in alignment with the springs of the adjacent rows. The core is of rectangular contour. The springs of each row are designated 1. The springs are arranged to provide longitudinal rows 2, 3, 4, 5, 6 and 7. It is to be understood that the number of rows of springs can be as desired, and that the number of springs contained in a row can be as desired. The number of rows is illustrated by way of example. The inner sides of the springs of the outer rows are tied to the sides of springs of adjacent rows by superposed coiled tie members 8 each of a length to extend from one end spring of a row to the other end spring of the row. The springs at one end of the rows are coupled together at their ends by superposed coiled end border members 9. The springs at the other end of the rows are coupled to-

gether by superposed coiled end border members 10. The outer side of the springs of one outer row are coupled together by superposed coiled side border members 11. 5 The outer side of the springs of the other outer row are coupled together by superposed coiled side border members 12. The members 8, 9, 10, 11 and 12 are resilient.

The mattress further includes a pair of 10 opposed, spaced parallel resilient sections 13, 14 corresponding in contour to that of the core. The sections 13, 14 are of like form and each consists of a web of metallic fabric formed from woven spiral wires. 15 The sections 13, 14 oppose respectively the top and bottom of the core. Coupling members 15 are employed for connecting the side and end edges of the resilient sections to the border members 9, 10, 11 and 12. 20 Certain of the members 15 couple springs of the rows 2 and 7 with the sides of the sections 13, 14.

The core is encased by an inner fabric casing 16 preferably of burlap. The top 25 and bottom walls 17, 18 of the casing being interposed between sections 13, 14 and the top and bottom of the core. The casing extends around the border members. The coupling members extend through the body of the casing. The side and end walls of the 30 casing extend into the sides and end of the core.

The sections 13, 14 and casing are encompassed by a cushioning body 19 of fabric 35 preferably heavy layers of felted cotton, the inner of which extends into the interstices of the sections 13, 14 to prevent said body shifting relative to said sections. The body 19 bears against the side and end walls of 40 the inner casing 16. The body 19 may be of any desired thickness and is of pad like form.

The body 19 is completely enclosed by a closed outer casing 20 of any suitable fabric 45 which is coupled with body 19 by spaced rows 21, 22 of inclined stitching positioned adjacent the corners of casing 20 and providing the marginal portions of the top and bottom of the mattress in the form of ribs 50 23, 24 respectively.

The interengaging of the cushioning body 19 in the interstices of the sections 13, 14 prevents the shifting and bunching of body 19 and eliminates entirely or to a great 55 extent, the requiring of the usual tufting to anchor body 19 in position.

When the mattress is completed that part of the outer face of its top between the end portions of the top rib is of convex curvature in cross section, and that part of the 60 outer face of its bottom between the end portions of the bottom rib is of concave curvature in cross section. The mattress when completed provides for double resiliency due 65 to the constructive arrangement of the core

and the form of the pair of resilient sections.

What I claim is:—

1. A mattress comprising, a core formed of rows of doubled coned spiral springs tied together by coiled resilient tie members and 70 coiled resilient border members coupled to said springs, resilient sections at the top and bottom of the core and each consisting of a web of metallic fabric formed from woven spiral wire, a casing encompassing said core 75 and having its top and bottom walls interposed between said sections and the core, spaced coupling members connecting said sections to said border members and to certain of said springs, a cushioning body of fibrous material seated against and extending 80 into the interstices of said sections and seated against the side and end walls of said casing, and a closed casing encompassing said body. 85

2. A mattress comprising, a rectangular resilient structure formed of a plurality of parallel rows of resilient elements coupled together, resilient border elements coupled 90 to the sides and ends of said structure at the top and bottom thereof, a pair of resilient webs of woven wire positioned at the top and bottom of said structure, a rectangular inner casing of fabric encompassing said structure and border elements and having 95 its top and bottom walls interposed between said webs and said structure, spaced coupling members connecting said webs to said structure and to said border elements, a padding element of fibrous material seated 100 against said webs and the side and end walls of said casing and of a character to extend into the interstices of said webs to prevent the shifting thereof, and a closed outer casing of textile material encompassing said 105 padding element and having the marginal portions of its side and end walls and its top and bottom wall secured together by inclined rows of stitching extending through said padding element. 110

3. A mattress comprising, a rectangular resilient structure formed of a plurality of parallel rows of resilient elements coupled together, resilient border elements coupled 115 to the sides and ends of said structure at the top and bottom thereof, a pair of resilient webs of woven wire positioned at the top and bottom of said structure, a rectangular inner casing of fabric encompassing said structure and border elements and having its 120 top and bottom walls interposed between said webs and said structure, spaced coupling members connecting said webs to said structure and to said border elements, a padding element of fibrous material seated 125 against said webs and the side and end walls of said casing, and a closed outer casing of textile material encompassing said padding element, said padding element extending 130 into the interstices of said webs to prevent

the shifting of such element relative to the webs.

4. A mattress comprising a resilient core, resilient border elements coupled at spaced intervals to the sides and ends of the core at the top and bottom of the latter, superposed webs formed of woven spiral wires, said core being arranged between said webs, a flexible inner casing encompassing said border elements and core and having parts extending between said webs and the said elements and core, said parts being coextensive with said webs, coupling members connecting said webs to the border elements, casing and core, a padding element of fibrous material positioned against said webs and against the other parts of said casing, and an outer casing of textile material enclosing said padding element.

5. A mattress comprising, a resilient rectangular core formed from oppositely cored spiral springs arranged in parallel rows, flexible tie members for connecting said rows together, resilient border elements of coiled form extending lengthwise of and having coils thereof at spaced intervals coupled to the sides and ends of the core at the top and bottom of the latter, spaced parallel webs formed of woven spiral wires, said core arranged between said webs, said elements arranged in proximity to said webs, a flexible inner casing encompassing said elements and core and having spaced opposed parts positioned between said core and webs and outwardly of said elements, coupling elements connecting the webs to said casing and elements, a padding element arranged against said webs and against the other parts of said casing, and a closed outer casing of textile material enclosing said padding element.

In testimony whereof, I affix my signature hereto.

SOLOMON COHEN.