July 1, 1958 J. J. WETZLER 2,841,209

FURNITURE STRUCTURE

Filed March 30, 1954 4 Sheets-Sheet 1

Fig. 1.

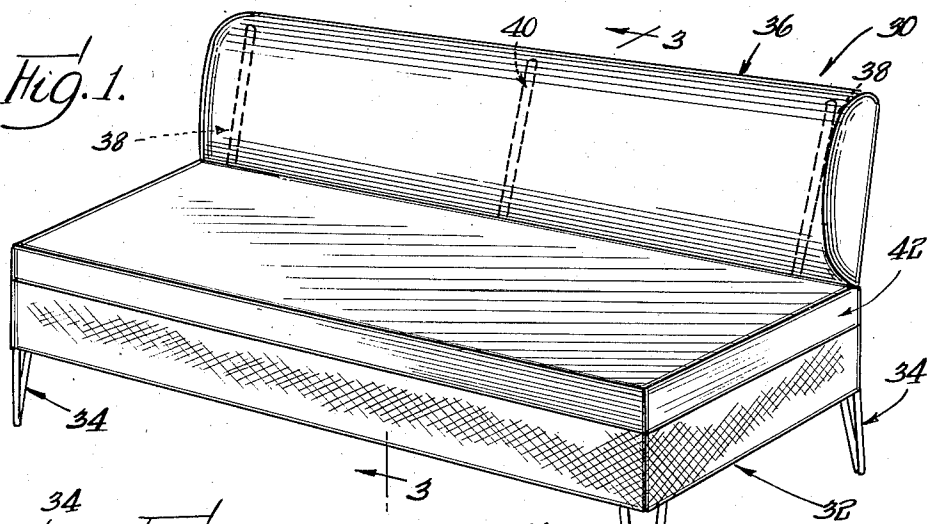
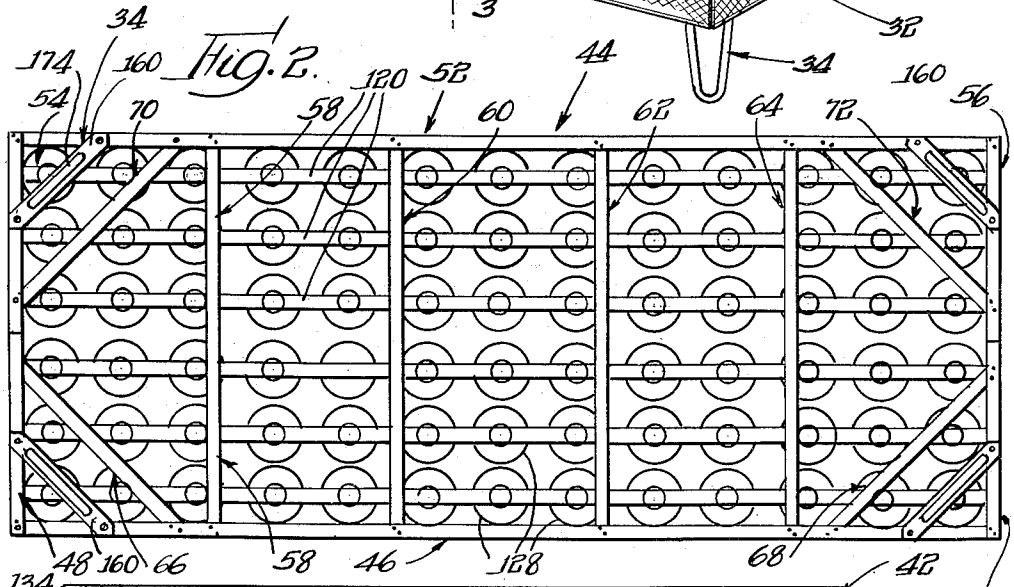


Fig. 2.



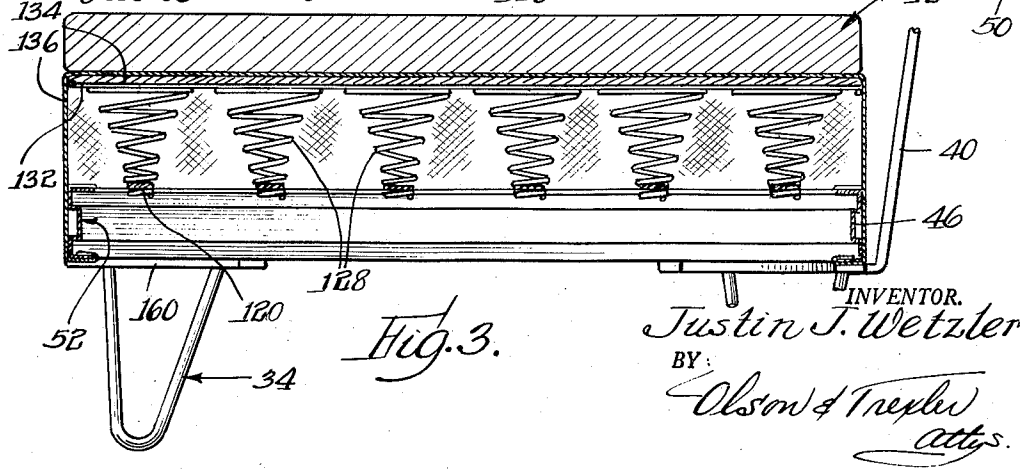


Fig. 3.

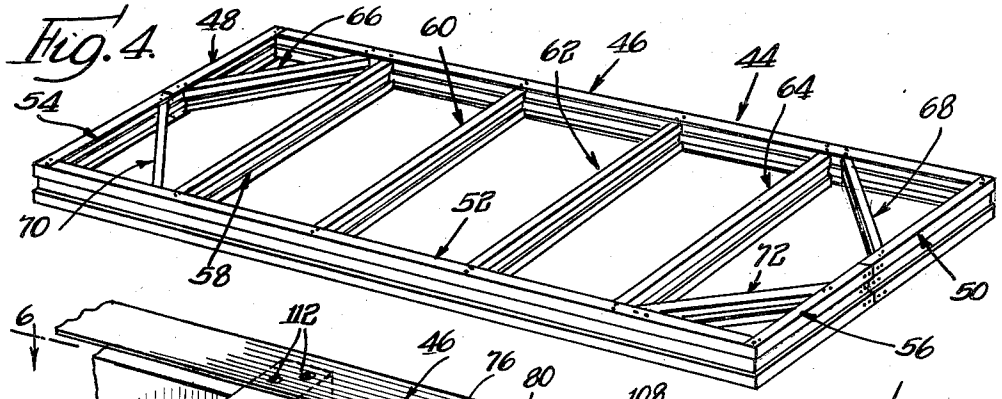
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FURNITURE STRUCTURE

Filed March 30, 1954 4 Sheets-Sheet 2

Fig. 4.



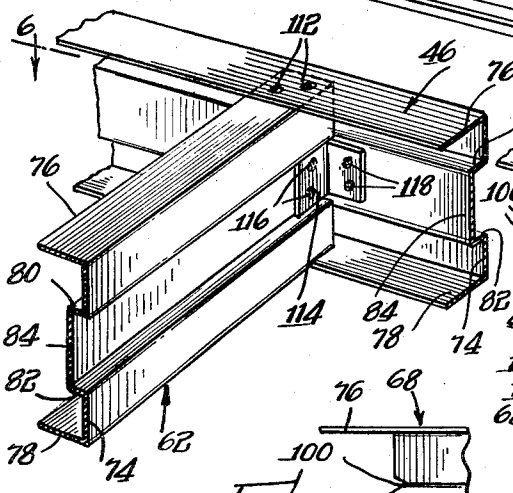
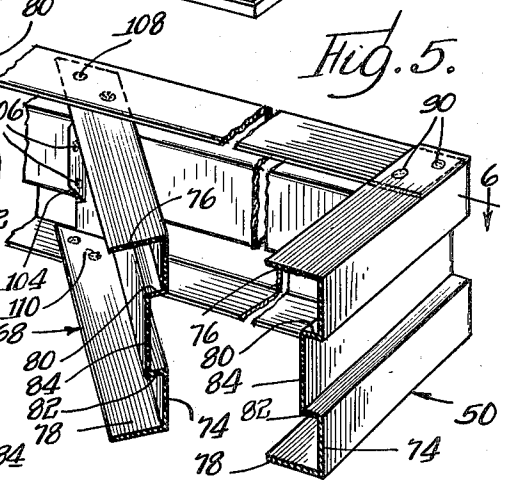


Fig. 5.



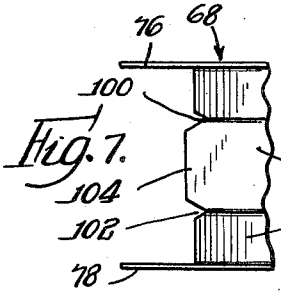


Fig. 7.

Fig. 6.

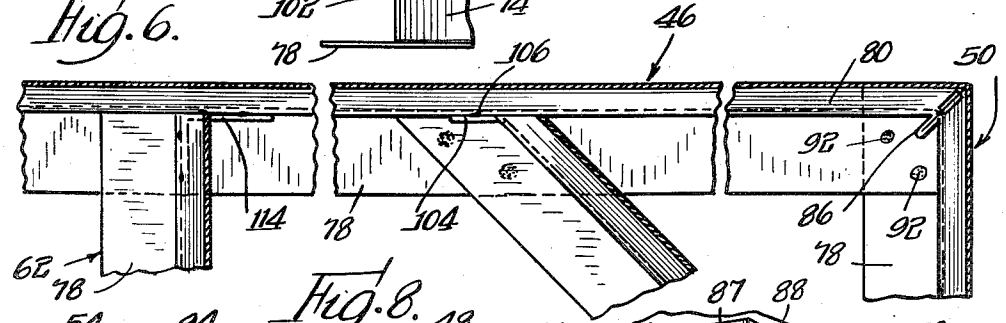
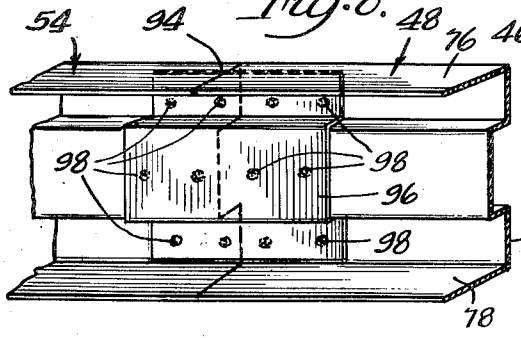


Fig. 8.



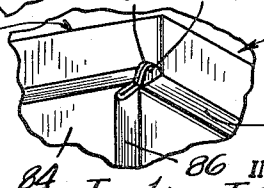


Fig. 9.

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FURNITURE STRUCTURE

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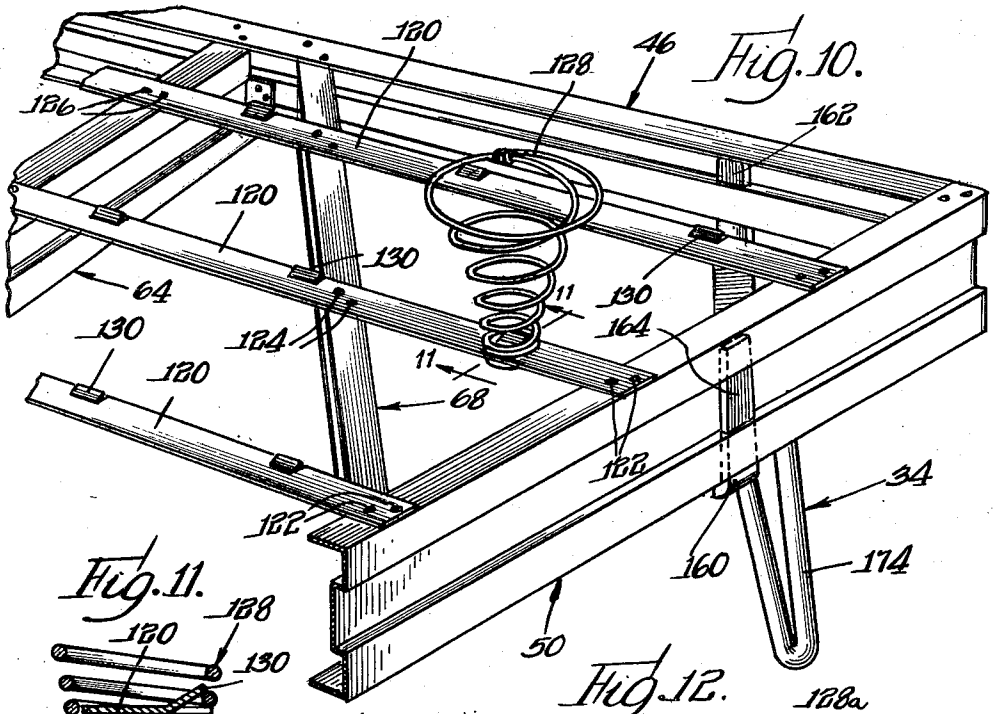


Fig. 10.

Fig. 11.

Fig. 12.

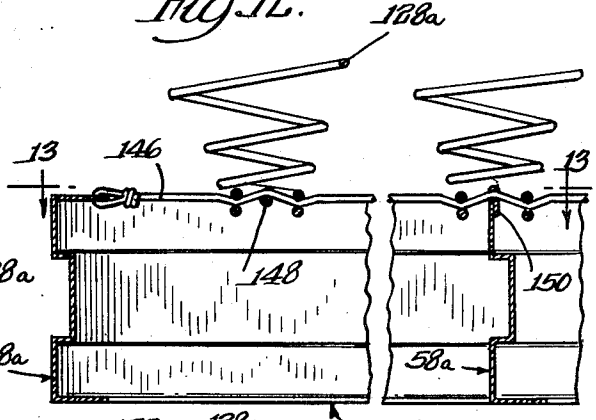


Fig. 13.

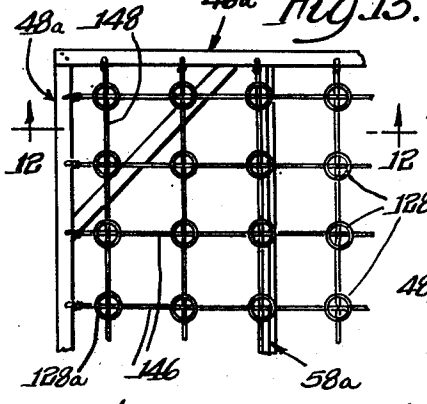


Fig. 14.

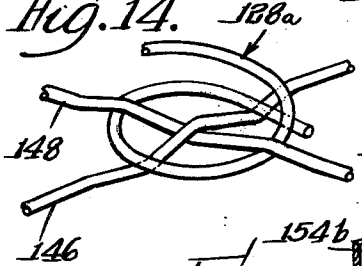


Fig. 15.

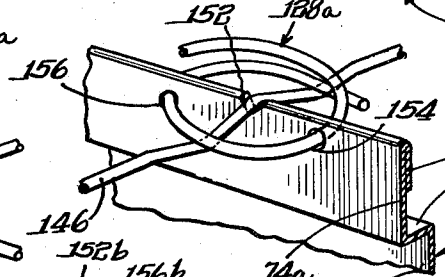


Fig. 16.



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FURNITURE STRUCTURE

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Fig. 17.

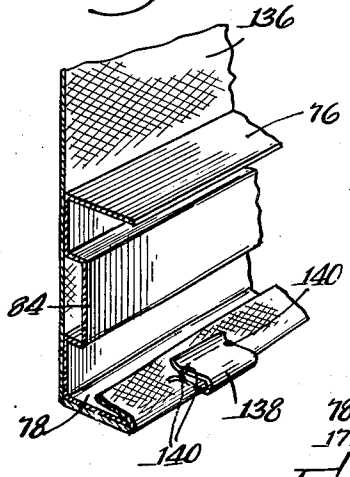


Fig. 18.

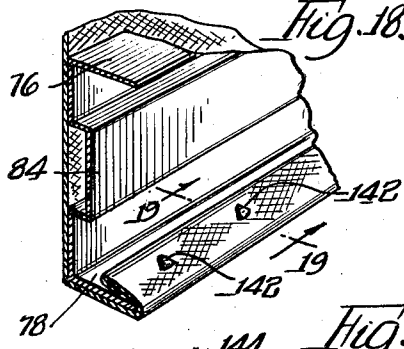


Fig. 19.

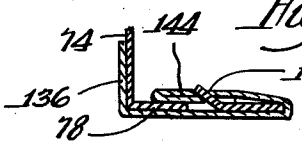


Fig. 20.

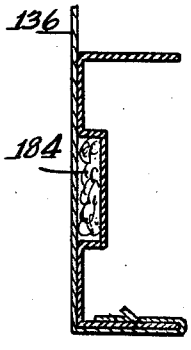


Fig. 22.

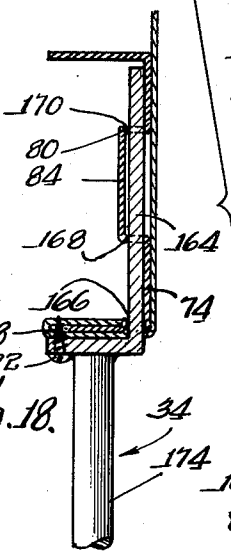


Fig. 23.

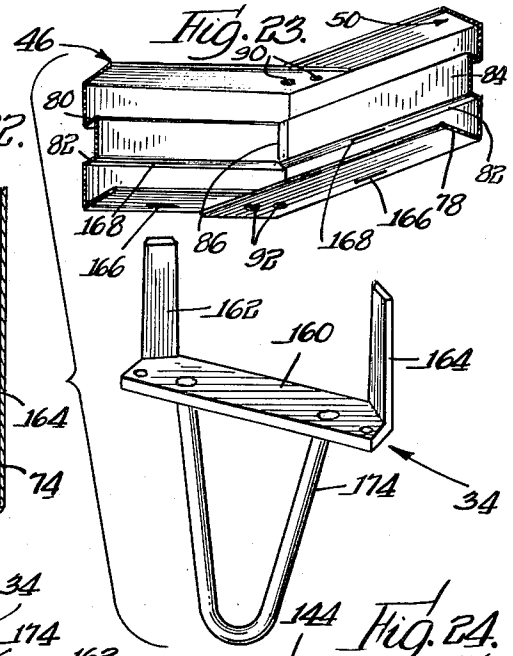


Fig. 24.

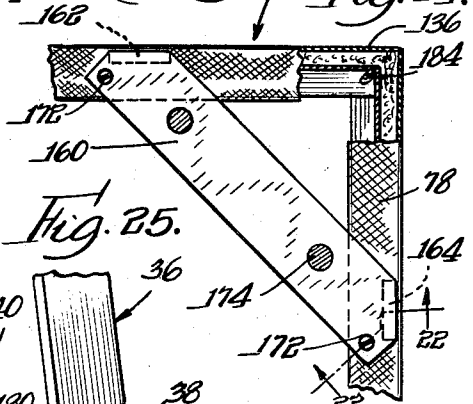


Fig. 25.

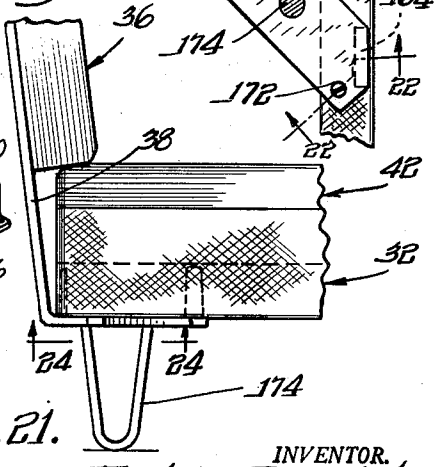
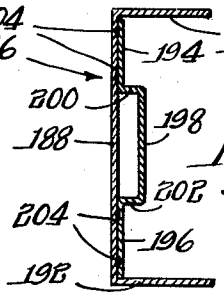


Fig. 26.



Fig. 21.



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United States Patent Office 2,841,209 Patented July 1, 1958

2,841,209

FURNITURE STRUCTURE

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Application March 30, 1954, Serial No. 419,736

16 Claims. (Cl. 155—181)

The present invention relates to furniture such for example as chairs, divans, couches, beds, or vehicle seats, having a novel box spring structure, and more particularly to a novel box spring structure which may be built into such furniture or which may be used as a separate unit therewith in the usual manner.

In the past such box spring units have generally been made by fabricating a rectangular wooden frame and then mounting a group of springs on the frame in various ways. The use of wooden frames for box springs has long been considered undesirable from a manufacturing standpoint since the accumulation of the necessary quantity of wood in a factory creates a substantial fire hazard and since workmen are frequently injured by splinters or slivers when handling wooden frames and often cut themselves when they are attempting to cut the wood. Furthermore, wooden frames are usually constructed at one plant and then shipped to various box spring assembling plants and since wooden frames cannot easily be shipped in a knocked down condition the shipping and handling charges are unnecessarily excessive. Another undesirable characteristic of wooden box spring structures having wooden frames is that they may be unduly noisy. This results from the fact that the wooden frames tend to amplify spring noises and also from the fact that the joints of the wooden frames may loosen and begin to squeak. It has been suggested that the wooden frames may be replaced by metal frames but such heretofore suggested metal frames have been relatively heavy, complicated and expensive so that wooden frames are still generally used.

An object of the present invention is to provide a novel box spring structure of the above described general type, which structure is provided with a metal frame that is relatively light in weight, of simple construction and inexpensive when compared to wooden frames heretofore used.

Another object of the present invention is to provide a novel metal frame for a box spring structure, which frame may be easily shipped in a knocked down condition and may be relatively easily assembled together.

Still another object of the present invention is to provide furniture incorporating a novel box spring structure of the type described in the preceding paragraphs, which furniture may also include supporting legs and/or a back rest connected to the frame of the box spring structure in a simple, economical, and rigid manner.

A further object of the present invention is to provide a novel box spring structure of the above described type wherein the springs are retained in assembled relationship with each other and with the metal frame in a simple and economical manner.

A more specific object of the present invention is to provide a novel box spring structure having a metal frame of the above described type, which structure also includes a covering fabric or ticking anchored to the metal frame in a simple and economical manner.

Other objects and advantages of the present invention will become apparent in the following description and the accompanying drawings wherein:

Fig. 1 is a perspective view illustrating a couch or daybed embodying the principles of this invention;

Fig. 2 is an enlarged bottom plan view of a couch or daybed embodying the features of this invention;

Fig. 3 is an enlarged cross sectional view taken along line 3—3 in Fig. 1;

Fig. 4 is a perspective view illustrating a novel metal frame for a box spring unit embodying the principles of this invention;

Fig. 5 is an enlarged fragmentary perspective view showing certain portions of the novel metal frame in greater detail;

Fig. 6 is a horizontal cross sectional view taken along line 6—6 in Fig. 5;

Fig. 7 is an elevational view showing an end of one of the diagonal frame members in greater detail;

Fig. 8 is a perspective view illustrating how two sections of the novel metal frame are joined together;

Fig. 9 is a fragmentary perspective view illustrating the novel corner structure of the metal frame;

Fig. 10 is an enlarged fragmentary perspective view showing a portion of the novel metal frame and a portion of the springs and spring anchoring means;

Fig. 11 is an enlarged fragmentary cross sectional sectional view taken along line 11—11 in Fig. 10;

Fig. 12 is a fragmentary vertical cross sectional view of a modified form of this invention taken along line 12—12 in Fig. 13;

Fig. 13 is a reduced fragmentary cross sectional view taken along line 13—13 in Fig. 12;

Figs. 14, 15 and 16 are perspective views illustrating various features of the modified structure shown in Fig. 12 in greater detail;

Fig. 17 is a fragmentary perspective view illustrating one means for anchoring the covering fabric to the metal frame;

Fig. 18 is a fragmentary perspective view showing a modified form of the present invention wherein lugs are struck from the metal frame to anchor the covering fabric;

Fig. 19 is an enlarged fragmentary cross sectional view taken along line 19—19 in Fig. 18;

Fig. 20 is a cross sectional view of one of the outside channel members of the metal frame and showing how the outer face of the channel member may be covered by a fabric and how the recess in the channel member may be filled with a suitable padding to prevent the covering fabric from sagging into the recess;

Fig. 21 is a cross sectional view of a channel structure embodying a modified form of the present invention;

Fig. 22 is a cross sectional view taken along line 22—22 in Fig. 24;

Fig. 23 is an exploded fragmentary perspective view illustrating how a support leg may be assembled with the metal frame;

Fig. 24 is an enlarged fragmentary cross sectional view taken along line 24—24 in Fig. 25;

Fig. 25 is a fragmentary end elevational view of a couch embodying the principles of this invention; and

Fig. 26 is a perspective view illustrating a bracket member for connecting a back rest to the metal frame of the box spring structure.

Referring now more specifically to the drawings wherein like parts are designated by the same numerals throughout the various figures, a couch or daybed 30 is shown in Fig. 1 for the purpose of illustrating an important application of the present invention. The couch 30 includes a box spring unit 32, a plurality of supporting leg structures 34 connected to the box spring unit in the manner de-

scribed below, a back rest **36**, and support arms or brackets **38** and **40** which are also connected to the box spring unit. A mattress **42** is disposed on the box spring unit and this mattress may be of inner spring or foam rubber construction or of any other known construction and if desired the single mattress **42** may be replaced by a plurality of cushions, now shown.

In accordance with the present invention the box spring unit includes a metal frame **44** shown best in its entirety in Figs. 2 and 4. The metal frame **44** includes a longitudinally extending side frame member **46** having integral end portions **48** and **50** bent inwardly to provide a part of the frame ends and a second longitudinally extending side frame member **52** also having inwardly bent end portions **54** and **56**. A plurality of transverse frame members **58, 60, 62** and **64** extend between and are secured to the side frame members in the manner described more fully hereinbelow and the corners of the frame structure are braced by diagonal frame members **66, 68, 70** and **72**.

In accordance with a feature of the present invention all of the frame members of the frame structure **44** are formed from lengths of sheet metal which have been rolled to provide the particular generally channel-shaped transverse cross section shown best in Fig. 5. More specifically, it will be seen by referring to Fig. 5 that each of the frame members is formed so that it includes a generally vertically extending web portion **74** having upper and lower horizontal flanges **76** and **78**. In addition, the web portion is formed with a reversely facing channel section, or in other words, the web portion **74** is formed with relatively short horizontal sections **80** and **82** joined by a bottom section **84**. This structure gives the relatively light weight sheet metal frame members great strength and rigidity so that the frame structure **44** is lighter and stronger than it would be if it were constructed from wood. Furthermore, substantial economies may be effected by utilizing the metal frame structure **44** since all of the frame members are cut from the same channel stock and they may be easily shipped in knocked down or disassembled condition to a factory where they are secured together.

As indicated above the side frame members **46** and **52** and their associated inturned end portions are each formed from a single piece of channel stock, which stock is formed so as to provide the frame structure with corners that are not only neat in appearance but also are strong and rigid. Since all of these corners are identical only the corner between the side frame member **46** and its end portion **50** will be described in detail. This corner is formed as shown best in Figs. 5, 6, 9 and 23 by slitting the horizontal flanges **76** and **78** and the horizontal portions **80** and **82** of the upstanding web **74** whereupon the end portion **50** is bent inwardly to the position illustrated with its flanges **76** and **78** embracing the corresponding flanges of the side frame member. During this folding operation the material of the channel portion **84** is looped or bent into a fold **86** which substantially strengthens the corner. At the same time the material of the horizontal channel portion **80** at opposite sides of the slit is folded upwardly in the form of tabs **87** and **88** and it will be understood that the material of the horizontal channel portion **82** at the opposite sides of the slit will be similarly formed. After the end portion **50** has been bent to the position illustrated, the upper flanges of the side frame member and the end portion are spot welded together as indicated at **90** and the lower flanges are similarly spot welded together as indicated at **92**.

After the side frame members **46** and **52** and their associated end portions have been formed in the manner just described the end portions **48** and **54** are joined together by the means shown best in Fig. 8 and the end portions **50** and **56** are similarly joined together as will be understood. The end portions **48** and **54** are butt welded as indicated at **94** in Fig. 8 and a sheet metal reinforcing member **96** having the same cross sectional shape as the web portion **74** is positioned within and welded to the end portions **48** and **54** at a plurality of spot welds **98**. Thus, the junction between the end portions **48** and **54** has a smooth neat external appearance and the particular cross sectional shape of the end portions and the reinforcing member **96** gives the junction great strength.

The diagonal frame member **68** is secured between the side frame member **46** and its associated end portion **50** in the manner shown best in Figs. 4, 5, 6 and 7. The ends of the diagonal member **68** are cut at an angle, as indicated, so that they may be inserted fully within the flanges of the side frame member **46** and its associated end portion. Since all of the frame members have the same cross sectional dimensions it is necessary to bend the flanges of the side member and the end portion and/or the flanges of the diagonal member to permit assembly of the diagonal member in the manner just set forth and the light weight of the sheet material stock permits such bending to be readily accomplished. In addition to cutting the ends of the diagonal frame member **68** at an angle the web portion of this frame member, at each end thereof, is notched as indicated at **100** and **102** in Fig. 7 to permit the diagonal member to be assembled over the sections **80—84** of the side frame member and the end portion **50** and also to provide tabs **104** which are bent to lie against the sections **84** of the side frame member and the end portion **50**. After the diagonal frame member **68** has been assembled the tabs **104** are spot welded to the side frame member **46** and its end portion as indicated at **106** and the upper and lower flanges of the diagonal frame member are spot welded as indicated at **108** and **110** to the corresponding flanges of the side frame member **46** and the end portion **50**. While only the end portion of the diagonal frame member **68** connected to the side frame member **46** has been shown in detail it is understood that the opposite end of the frame member is constructed in a similar manner for connection to the end portion **50** and it is further understood that the remaining diagonal frame members are identical to the frame member **68**.

The transverse frame members **58—64** are also inserted within and spot welded to the upper and lower flanges of the side frame members. Since each end of all of the transverse frame members is connected to its associated side frame member in the same manner only the connection of the transverse frame member **62** to the side frame member **46** will be described in detail. Referring particularly to Figs. 5 and 6 it is seen that the frame member **62** is inserted between the flanges **76** and **78** of the side frame member until it abuts against the section **84** of the side frame member. It should be noted that the flanges **76** and **78** are substantially longer than the horizontal sections **80** and **82** whereby the flanges of the side frame member may be spot welded to the corresponding flanges of the transverse frame member as indicated at **112**. The connection between the transverse frame member and the side frame member is further strengthened and rigidified by means of an angle bracket **114** which is spot welded as at **116** and **118** to the sections **84** of the transverse frame member and side frame member respectively.

Referring particularly to Figs. 2, 3, and 10 it is seen that a plurality of longitudinally extending flat metal strips **120** are spaced from each other transversely across the top of the frame structure **44**. These strips are spot welded at their opposite ends to the ends of the frame structure in the manner indicated best at **122** in Fig. 10 and they are also spot welded to the diagonal frame members and the transverse frame members as indicated at **124** and **126**. Thus, the strips **120** serve to further strengthen and rigidify the frame structure. In addition, each of the strips **120** serves to support a row of coil

springs **128**. In this embodiment, each of the springs **128** is of inverted generally frusto-conical shape with its bottom end coiled tightly together as shown best in Fig. 11. The tight bottom coils of each spring are slipped over one of the strips **120** and resiliently grip the strip for retaining the spring and the strip in assembled relationship. In addition, each of the strips **120** is provided with a series of upwardly struck tabs **130** with each of the tabs located to project within one of the springs as shown in Fig. 11 and retain the spring in the desired position upon the strip. With this structure it has been found that the springs are sufficiently supported so that their upper ends need not be tied together or otherwise positively held in place.

The box spring unit **32** includes an insulator **132** of any known construction overlying the springs **128**. A pad **134** of sisal or cotton or any other suitable material is placed over the insulator and the assembly is enclosed bya suitable fabric covering **136**. The fabric covering extends downwardly around the metal frame and is secured to the frame in the manner shown in Fig. 17. Thus, the fabric is wrapped around the lower flange **78** of the frame side and end members and a generally U-shaped spring clip **138** is snapped over the flange and fabric. The clip includes a plurality of inwardly and rearwardly projecting struckout teeth **140** which dig into the flange and positively prevent disassembly of the clip. While only one clip **138** is illustrated it is understood that a plurality of these clips should be spaced along the flange **78** entirely around the frame structure.

In Figs. 18 and 19 there is shown a modified structure for securing the covering fabric **136** to the frame. In this embodiment the clips **138** are eliminated and a plurality of spaced teeth **142** are struck from the flange **78** and project into the fabric. Preferably the margin of the fabric is folded into at least a double thickness as indicated at **144** to prevent the teeth from tearing the fabric.

In Figs. 12, 13, 14 and 15 there is illustrated a modified box spring structure which is similar to the structure described above as indicated by the application of identical numerals with the suffix *a* added to identical parts. This embodiment differs from the structure described above in the manner in which the springs are supported. The above described elongated metal strips **120** have been replaced by a grid of longitudinally extending wires **146** and transversely extending wires **148**, which wires are connected to the frame by passing end portions thereof through suitable apertures provided in the frame as shown best in Fig. 12. At every crossing of the wires **146** and **148** they are formed with mating undulated portions as shown best in Fig. 14. With this structure one of the coil springs may be connected to each crossing of the wires **146** and **148** by passing the end of the spring first under the wire **148**, then over the wire **146**, then under the wire **148** again, and finally over the wire **146** in the manner illustrated.

As indicated in Figs. 12 and 15 the transverse wires **148** may be omitted at the positions occupied by the transverse frame members and the transverse frame members may be modified to perform the function of the omitted wires. This modification is accomplished by bending the upper flange of each transverse frame member such as the frame member **58***a* into a vertical position and then reversely folding the margin **150** of the flange. As shown best in Figs. 12 and 15, the resulting double thickness of the transverse frame member **58***a* projects above the plane of the wires **146** and therefore the upper edge of the transverse frame member is notched as at **152** to receive each wire **146**. In addition, the transverse frame member is provided with a pair of apertures **154** and **156** located on opposite sides of each of the wires **146**, which apertures are adapted to receive a coil spring in the manner illustrated so that the transverse frame member cooperates with the longitudinally extending wire **146** for mounting spring.

In Fig. 16 there is illustrated a modified form of the structure illustrated in Fig. 15. In the embodiment of Fig. 16 the transverse frame member **58***b* instead of being modified into the form shown in Fig. 15 supports a sheet metal angle member **158** which is spot welded thereto. The upwardly extending flange of the angle member is provided with a slot **152***b* and apertures **154***b* and **156***b* which have the same function as the corresponding elements shown in Fig. 15. It is of course understood that a plurality of slots and associated apertures will be spaced along the length of the angle member to accommodate a plurality of wires **146** and a plurality of springs.

The support leg structure **34** is shown in Figs. 1 through 3, 10 and 22 through 25. The support leg structure includes a bracket having a base **160** and a pair of flat vertically extending and angularly disposed fingers **162** and **164**. The base and fingers are preferably formed from a single piece of heavy sheet metal. As shown best in Figs. 22, 23 and 24 the bracket is connected to the metal frame **44** by inserting the fingers **162** and **164** through suitable slots formed in the metal frame. More particularly, the lower flange **78** and the upper and lower horizontal sections **80** and **82** of each of the frame side members and end portions are respectively provided with narrow slits **166**, **168** and **170** for receiving one of the fingers **162**—**164**. Preferably the fingers are slightly tapered toward their outer ends and are substantially thicker than the width of the slits, whereby the fingers may be forced or driven through the slits and tightly held in place. Preferably the fingers are driven into the slits after the fabric covering **136** has been applied to the frame so that the fabric will be drawn into the slit **166** around each finger as shown in Fig. 22 and thereby present a smooth and neat appearance. While the fingers **162** and **164** of the bracket will normally be tightly gripped and held in position it may be desirable to positively lock the bracket against accidental loosening by passing screws **172** through suitable apertures provided therein and threading the screws into the frame structure. In the illustrated embodiment a leg **174** is secured to the bracket base **160** and this leg consists of a generally U-shaped metal rod. However, it should be understood that the leg **174** may be of any known construction and may be connected to the bracket in any suitable manner. With the structure just described it is seen that the particular cross sectional shape of the frame members enables the support leg brackets to be applied to the frame in an extremely simple and economical manner while at the same time the connection between the leg bracket and the frame is strong and free from looseness.

In Fig. 26 there is illustrated the back rest supporting bracket **40**. This bracket is connected with a frame structure in much the same manner as the leg bracket described above. More particularly, the bracket **40** includes a heavy sheet metal base **176**, a pair of fingers **178** and **180** extending upwardly from the base, and a back rest support arm **182** extending upwardly from the base. The fingers **178** and **180** are adapted to be inserted through slits in the frame structure, which slits are identical to the slits **166**—**170** described above and the fingers **178** and **180** are identical to the fingers **162** and **164** of the leg bracket except that they are disposed in the same or parallel planes rather than in angularly disposed planes. The back rest support brackets **38** which are partially shown in Fig. 1 may be identical to the bracket **40** or they may include arms integral with or connected to the base **160** of one of the leg brackets. It is understood that arm rests, not shown, may also be mounted to the frame **44** in the same manner as the back rest. Such arm rests as well as the back rest may be provided by a metal frame essentially the same as the frame **44** covered with suitable padding and either with or without suitable spring means anchored thereto.

As will be understood the fabric covering **136** which is

stretched tightly over the outwardly facing surface of the sheet metal frame may tend to sag into the inwardly formed channel or recess in the outer surface of the frame structure. This tendency of the material to sag into the channel is particularly noticeable at the corners of the metal frame and therefore the corners are preferably filled with any suitable padding material as indicated at **184** in Fig. 24. In addition, it may be sometimes desirable to fill the channel with the padding material as shown in Fig. 20. The channel may be filled with the padding material all the way around the frame or only for example, along the front of the frame.

In Fig. 21 there is illustrated the cross section of a channel member **186** which may be used in place of the channel members described above. The channel member **186** includes an outer vertical web **188** having upper and lower integral horizontal flanges **190** and **192**. The channel member **186** includes a second part having vertical sections **194** and **196** which are offset from another vertical section **198** by short horizontal sections **200** and **202**. The vertical sections **194** and **196** are spot welded as indicated at **204** to the vertical web **188** so that the two sections of the channel member combine together to provide the channel member with great strength and rigidity without an undue increase in weight. It should be noted that the cross sectional shape of the channel member **186** is essentially the same as the cross sectional shape of the channel member described above and shown for example in Fig. 20 so that the advantages of this cross sectional shape in facilitating rapid and economical fabrication of a strong light weight metal frame are retained. Besides being substantially stronger than the previously described channel members, the channel member **186** has the further advantage of presenting a smooth outer surface so that the extra step of filling the inwardly extending channel of the structure shown in Fig. 20 with the padding **184** may be eliminated.

From the above description it is seen that the present invention has provided a novel box spring structure which may be used in a conventional bed or which may equally well be built into a couch or daybed or similar piece of furniture.

As will be understood, the term furniture as used herein in the description and claims includes any and all assemblies with which the novel box spring structure of this invention may be used, such for example, either back, arm or cushion portions of vehicle seats, couches, divans or chairs, and beds wherein the box spring structure is either separable or with attached legs such as in Hollywood bed types and the like. It also is seen that the present invention has provided a novel box spring structure having a metal frame which may be more easily and economically fabricated than wooden frames heretofore used and which is relatively light in weight and may be economically shipped in a knock-down condition. In addition, it will be appreciated that the use of the metal frames of this invention enables the frames to be fabricated readily in various sizes and shapes and permits frame portions to be added to a frame whenever desired. More specifically, it is seen that the present invention has provided a novel metal frame which includes light weight sheet metal members having a particular cross sectional shape such that the frame members may be easily assembled and provide a strong and rigid frame structure and in addition the frame members are particularly adapted for easy connection to leg or back rest support brackets and the like. Furthermore, it is seen that the present invention has provided a novel box spring structure wherein the springs and covering fabric are connected to the novel metal frame in an extremely simple and economical manner.

While the preferred embodiments of the present invention have been shown and described herein it is obvious that many structural details may be changed without departing from the spirit and scope of the appended claims.

The invention is claimed as follows:

1. In a piece of furniture a box spring structure, comprising a rectangular frame including channel-shaped sheet metal side frame members having inturned upper and lower flanges and channel-shaped sheet metal end frame members having upper and lower inturned flanges, each of said end frame members being integrally connected with an associated side frame member and having portions of its flanges overlapping portions of the flanges of the associated side frame member, and means securing said overlapping flange portions together.

2. In a piece of furniture a box spring structure, as defined in claim 1, wherein each end of said frame is provided by a pair of said end frame members, and wherein each pair of said end frame members are butt welded together.

3. In a piece of furniture a box spring structure, as defined in claim 2, which includes a sheet metal member disposed within and conforming to each pair of said end frame members, and weld means securing the sheet metal member to both of its associated end frame members.

4. In a piece of furniture a box spring structure, comprising a rectangular frame including channel-shaped sheet metal side frame members having upper and lower inturned flanges, channel-shaped sheet metal end frame members having inturned upper and lower flanges and integrally connected with said side frame members along bent corner portions, diagonally disposed channel-shaped sheet metal frame members extending between and secured to said side frame members and mid-portions of adjacent end frame members at each corner of the rectangular frame, and transverse channel-shaped sheet metal frame members extending between and secured to said side frame members, said diagonal frame members having end portions thereof disposed between and secured to the upper and lower flanges of their associated side frame member and end frame member.

5. In a piece of furniture a box spring structure, comprising a rectangular frame including sheet metal side frame members, and sheet metal end frame members, each of said frame members having a generally upstanding web, upper and lower generally inturned flanges, and an inwardly projecting channel section disposed between said flanges, the web of each of said end frame members being integrally joined at a corner with the web of an adjacent side frame member, and the upper and lower flanges of adjacent end and side frame members respectively being disposed in relatively overlapping relationship and secured together at each corner of the rectangular frame.

6. A piece of furniture, as defined in claim 5, wherein said inwardly projecting channel section of each of said frame members is integral with the generally upstanding web of its frame member.

7. A piece of furniture, as defined in claim 5, wherein said inwardly projecting channel section of each of said frame members is separate from and secured to the generally upstanding web of its frame member.

8. A couch or the like including a box spring structure, as defined in claim 5, wherein said channel sections of said side and end frame members open outwardly, and which includes sheet metal means overlying said channel section and preventing a fabric covering from entering the channel sections.

9. A couch or the like including a box spring structure, as defined in claim 5, wherein said channel sections of said side and end frame members open outwardly, and wherein said channel sections are filled with padding material at the corners of the rectangular frame.

10. A couch or the like, as defined in claim 9, wherein said channel sections are filled with padding material substantially entirely around the rectangular frame.

11. In a piece of furniture a box spring structure, comprising a rectangular frame including a sheet metal side frame member, and a sheet metal end frame member, each of said frame members having a generally vertically disposed web, inwardly directed flanges extending from adjacent upper and lower margins of said web, and an inwardly projecting channel section forming a part of said web, said side and end frame members being integrally joined at corners of the rectangular frame by their webs and the integral connection between the inwardly projecting channel sections of the webs being provided by an inwardly looped portion, the upper and lower flanges of said side and end frame members respectively being disposed in relatively overlapping relationship and secured together at said corners.

12. A piece of furniture comprising a box spring structure including a rectangular metal frame, and a plurality of longitudinally and transversely extending wires respectively connected to opposite ends and opposite sides of the frame, each of said longitudinally and transversely extending wires at locations where they cross each other having undulated portions adapted to accommodate a coil of a spring so that the coil passes over one of the wires and under the other of the wires for mounting the spring.

13. A piece of furniture comprising a box spring structure including a rectangular sheet metal frame, a plurality of transverse sheet metal frame members extending between and secured to opposite sides of the rectangular frame, and a plurality of longitudinally extending wires crossing said transverse frame members, said transverse frame members having aperture means therethrough adjacent the crossing wires for receiving a coil of a spring and cooperating with the crossing wires to support said spring.

14. A piece of furniture, as defined in claim 13, wherein said transverse frame members include integral upwardly extending portions in which said aperture means are provided.

15. A piece of furniture, as defined in claim 13, wherein said transverse frame members include an angle section secured to a channel section and having an upwardly extending flange, and wherein said aperture means are

provided in the upwardly extending flange of said angle section.

16. A piece of furniture of the type described comprising a pair of angularly disposed sheet metal frame members joined together to provide a corner portion of a frame, each of said frame members including an upstanding web portion having an inwardly projecting channel section and an inwardly projecting flange integral with a lower margin of the web portion, each of said channel sections having a pair of horizontally disposed portions vertically spaced from each other and from an adjacent flange, means defining a first set of substantially vertically aligned entirely enclosed slits in said flange and the horizontal portions of one of said frame members, means defining another set of substantially vertically aligned entirely enclosed slits in the flange and the horizontal portion of the other of said frame members, and a support bracket for the frame including a base portion underlying and extending between said frame members adjacent said corner, and a pair of finger means extending upwardly from opposite ends of said base portion and respectively wedged into said first and second sets of slits for securing the support bracket to the frame.

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