

July 23, 1935.

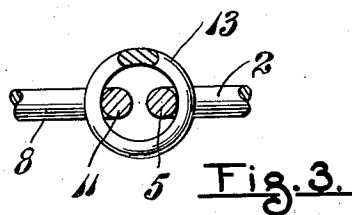
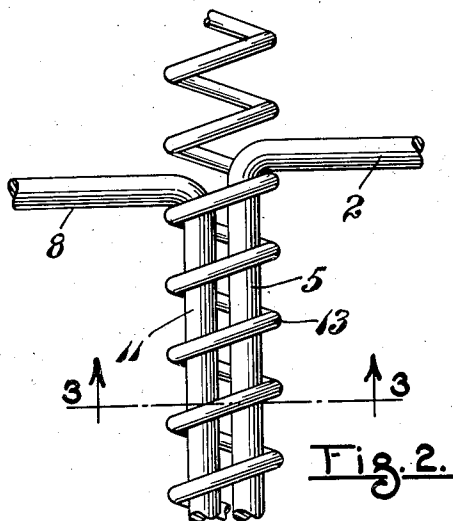
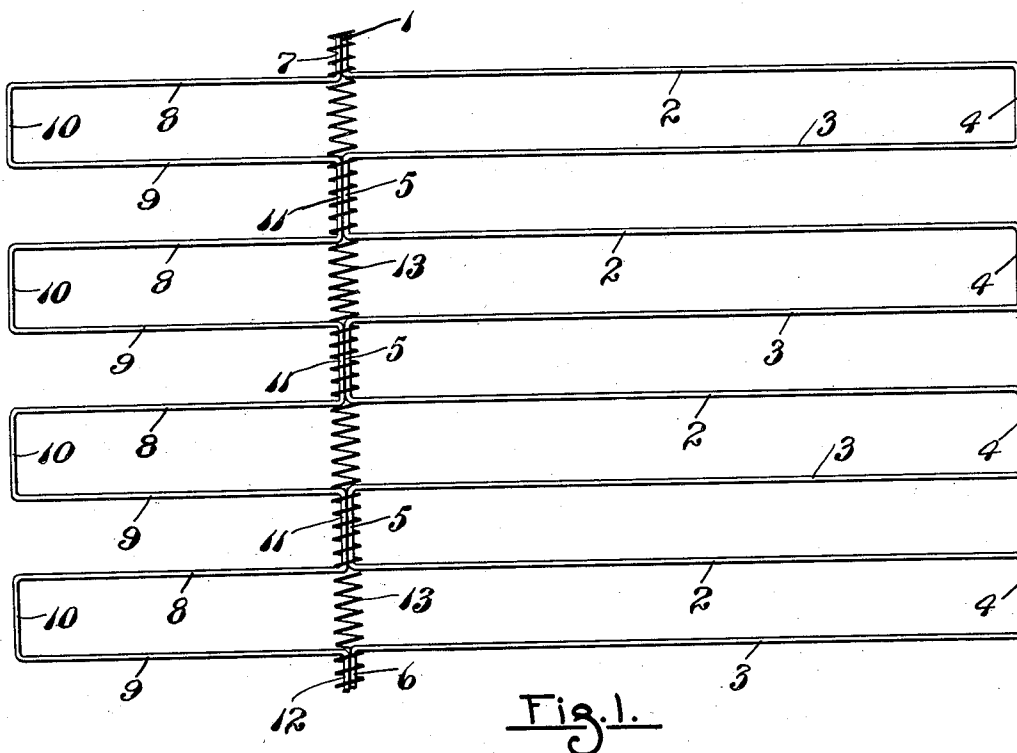
J. L. McINERNEY

2,008,917

WIRE FRAME AND JOINT THEREFOR

Filed Feb. 19, 1934

2 Sheets-Sheet 1



Inventor
James L. McInerney
By *Liverance and Van Antwerp*
Attorneys

July 23, 1935.

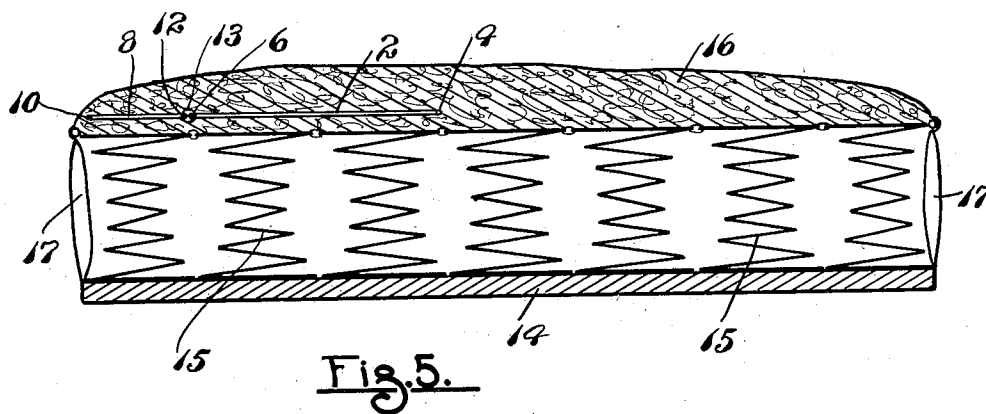
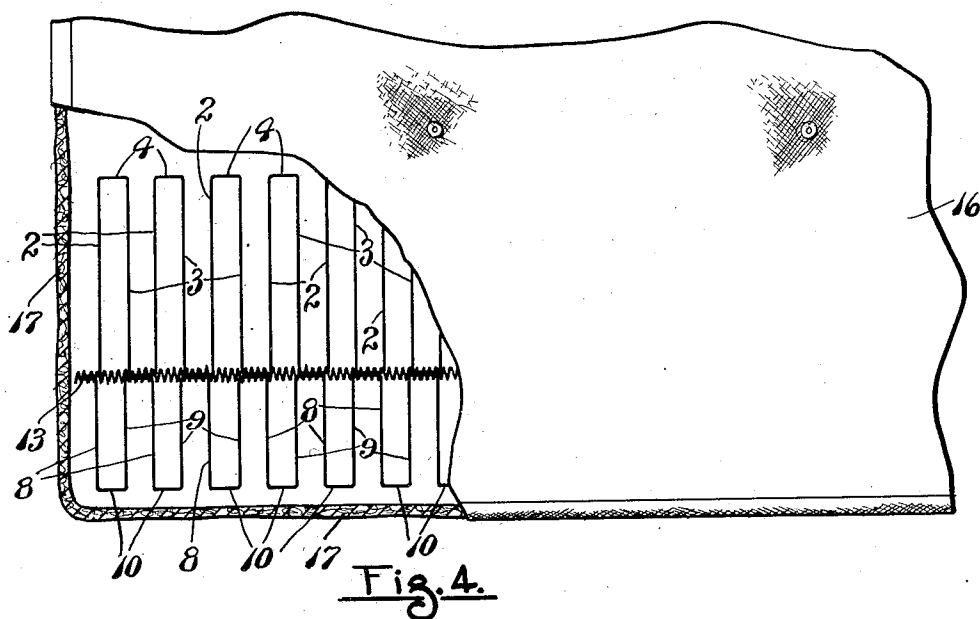
J. L. McINERNEY

2,008,917

WIRE FRAME AND JOINT THEREFOR

Filed Feb. 19, 1934

2 Sheets-Sheet 2



Inventor
James L. McInerney
By Liverance &
Van Antwerp
Attorneys

UNITED STATES PATENT OFFICE

2,008,917

WIRE FRAME AND JOINT THEREFOR

James L. McInerney, Grand Rapids, Mich.

Application February 19, 1934, Serial No. 711,849

2 Claims. (Cl. 155-179)

This invention relates to a jointed wire frame of a very simple, novel and economical type and construction, readily manufactured and assembled and very useful in connection with seats of various types and characters such as automobile seats, chair seats or the like or in connection with mattresses or other like articles upon which a person may sit or lie. It is a primary object and purpose of the present invention to provide an economical, simple and very useful device of the character specified, and the invention consists in the novel construction and arrangement of parts hereinafter more fully described and specifically defined in the claims.

An understanding of the invention may be had from the following description, taken in connection with the accompanying drawings, in which, Fig. 1 is a plan of the jointed wire frame device made in accordance with my invention.

Fig. 2 is a fragmentary enlarged plan view illustrating the manner in which the two frame members used are joined together.

Fig. 3 is a transverse section substantially on the plane of line 3-3 of Fig. 2.

Fig. 4 is a plan view of a seat, such as may be used in a chair or other article of furniture, a part of the upper portion thereof being broken away and shown in section to illustrate the assembly and use of the device of my invention therein, and

Fig. 5 is a transverse vertical section therethrough.

Like reference characters refer to like parts in the different figures of the drawings.

In the construction of the wire frame a plurality of wire frame members are provided, each made from a single length of wire. In the drawings, two of such members are shown. One of said elements, starting at one end of the wire, is formed to provide a terminal portion 1, and is then bent into a consecutive series of elongated wire loops having substantially parallel sides 2 and 3 connected at their outer ends by a cross member 4. The loops at their inner ends have the sides 2 and 3 of adjacent loops connected by a similar cross member 5, and the wire member terminates at its opposite end in an outturned terminal portion 6. The terminal portions 1 and 6 and the intermediate connecting portions 5 are in alinement. The inner connecting parts 5 are bent substantially at right angles from the sides 2 and 3 of the loops with which they are directly connected. While the drawings show the outer connecting members 4 likewise bent at right angles to the sides 2 and 3, such forming of the outer ends of the loops is not essential and the

connection of the sides 2 and 3 of the loops at their outer ends may be made differently, as for example, the connecting portion may be formed in the arc of a circle.

The other member of the wire frame is similarly formed, beginning with a short terminal section 7, loops having parallel sides 8 and 9 connected at their outer ends by connecting portions 10 and at their inner ends by connecting portions 11 and terminating in an outturned terminal portion 12. The second member of the wire frame may be in all respects like the first member described, and in practice differs therefrom only in that the sides of the wire loops formed are shorter in the second member than in the first member. This however, is in no sense essential to the invention as there may be some conditions of use where the sides of the loops of the two members may be of substantially the same length. The parts 7 and 11 of the second wire member described are likewise located in alinement. The distance between the sides of the loops in both members preferably are equal.

In the assembly of the two members of the wire frame described, the parts 1 and 7 are brought together, the parts 5 and 11 likewise and the parts 6 and 12. A helical wire 13 is then threaded by a turning movement starting, for example, over the ends of the parts 5 and 12 and being turned around and in effect screwed upon the parts 5 and 11 in succession and finally upon the ends 1 and 7. This provides a jointed wire frame in which the two frame members are connected together, but have a free pivotal movement around the longitudinal axis of the helix 13.

The structure described may be used as shown in Figs. 4 and 5. Therein is illustrated a seat having a bottom 14, spring structure 15 above the bottom, covered by an unholstered top 16 with surrounding fabric and upholstering cover 17 around the sides and ends of the seat between the bottom 14 and the cover 16. The wire structure described, is shown as located adjacent one side of the seat with the shorter frame member, the second frame member described, with its outer end portion located close to an edge of the seat. The installation of the frame member may also be made lengthwise at either one or at both sides of a mattress in the upper covering portion thereof. In a seat where it is located at one side portion thereof only, it is to be installed toward the front of the seat.

The structure described is very useful in seats, mattresses or the like serving to reinforce and support the upholstering and prevent the same

from pressing downwardly into the spring structure below. Located at the forward portion of a seat or at both sides of a mattress the weight of one sitting on the seat or mattress is transmitted to the wire frame structure which, by reason of its construction, may have its parts freely turn about the longitudinal axis of the connecting helical wire 13. At the same time the wire from which the frame members is made is flexible and may yield at the points where the greatest weight is applied and will readily return to its original position when the weight is removed. It also holds upholstering material above the wire frame members from packing and pressing downwardly into the lower spring structure, such as shown at 15 in Fig. 5, and aids greatly in preserving the shape of the seat or mattress and preventing sagging thereof at points where weight it most frequently applied for the longest times.

20 The construction is simple, economical and is very readily and easily manufactured. It may be made in any length desired for the particular purpose which it is to serve. The invention is defined in the appended claims and is to be considered comprehensive of all forms of structure coming within their scope.

I claim:

1. A top unit construction of the class described comprising a piece of upholstery of substantially rectangular shape and having a front edge, a fabric surrounding the same to provide a cover therefor, and a spring structure non-symmetrically located in the piece of upholstery and adjacent the said front edge, said spring structure comprising two sections hinged together, the hinge being located in parallelism to the said front edge of the said upholstery.

2. In a seat or the like comprising, a plurality of parallel rows of coiled springs forming an under supporting spring structure, the combination of, upholstery consisting of padding over the spring structure, a covering for the padding, and resilient means mounted in the padding adjacent one edge thereof, said means comprising two sections hinged together, the hinge being in alinement with the rows and spaced between two of the rows, said resilient means being of substantially lesser size than the padding whereby the same terminates intermediate the edges thereof.

JAMES L. MCINERNEY. 25