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FRAME FOR SPRING CUSHIONS AND THE LIKE

Filed May 22, 1922

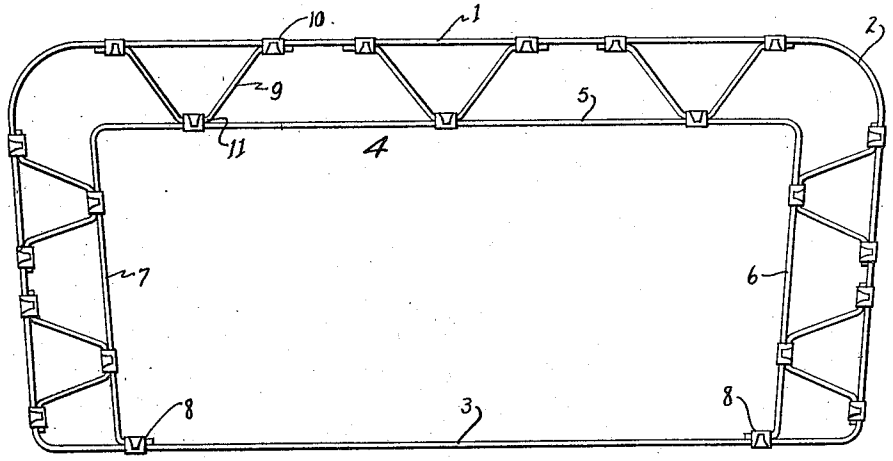


Fig. 1.

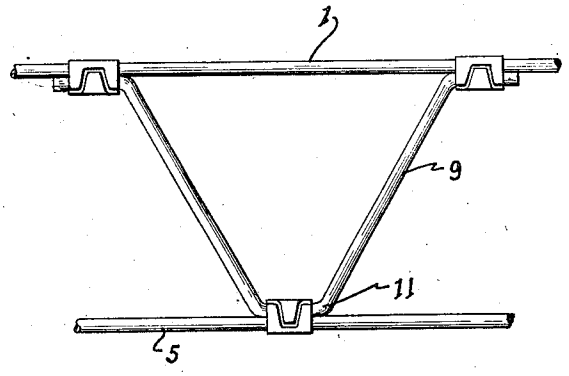


Fig. 2.

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FRAME FOR SPRING CUSHIONS AND THE LIKE.

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To all whom it may concern:

Be it known that I, HARRY H. KNEPPER, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Frames for Spring Cushions and the like, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to frames for spring seats and the like such as cushion seats for vehicles, mattresses etc., and the object thereof is to provide a frame member defining the outline of the cushion or mattress that is reinforced across the front and across the two parallel ends thereof by a simple and inexpensive means of a character to prevent the marginal portions of the frame from springing inwardly. Heretofore with certain frame constructions the front and side members of the frame have a tendency to spring inwardly. Also with the usual frames for this purpose heretofore manufactured, the springs of the cushion (which are usually in rows) that lie within the border springs of the cushion are not materially affected by depression of the frame. This invention seeks to provide a border and a secondary frame, one object of said secondary frame being to provide a part overlying springs of the cushion that are positioned within the border springs of the group, such secondary frame being hingedly connected with the border frame in a manner to reinforce the same and to still permit deflection of the secondary frame relative to the border frame whereby springs within the border springs of the group are brought into action. Thus a spring cushion that is more resilient and of greater strength is secured by my improved frame. To this end the invention consists in the arrangement of the parts as is hereinafter more fully set forth and claimed, and the preferred form of construction of a spring seat frame embodying my invention is shown in the accompanying drawings in which—

Fig. 1 is a plan view of the frame.

Fig. 2 is an enlarged view showing the mode of attaching reinforcing members between the border and secondary frames.

It is common to provide border frames for spring seats and cushions and, while I have shown a frame practically rectangular in form, it is to be understood that the construction may be readily applied to frames of different widths and proportions without departing from the spirit of this invention. In the preferred form of construction I provide what I have termed a border frame 1 which may be of any approved form and is preferably of wire. The front side of this border frame and the two parallel ends may be of a continuous piece and preferably the corners are rounded as indicated at 2. The rear side of the frame may be a straight member as shown at 3 preferably integral or fixedly connected with other parts of the border frame. Within this border frame I provide a secondary frame 4 also preferably of wire having a front member 5 parallel and in spaced relation with the front side 1 of the border frame and two end members parallel with the ends of the border frame and similarly spaced therefrom. These end members 6 and 7 are hinged at 8 to the rear member 3 of the border frame as indicated in Fig. 1 permitting this secondary frame to turn relative to the border frame. Intermediate the ends and front side of the border and secondary frames I have provided tie members 9 which have substantially the form of a V, the two legs of which are bent outwardly and hingedly connected by a clip 10 to the border frame. The inner end of the member is provided with a portion 11 lying parallel with and in contact with the secondary frame and a clip 10 is also provided at this point thereby connecting the two frames together by a hinge connection which also, to a limited extent, permits the secondary frame to move upon its hinge connection with the member 3 of the border frame. These members 9 form braces between the border and secondary frame that are non-yieldable in the plane of the frame and due to the hinge connection permit the secondary frame to turn to a limited extent out of the plane of the border frame. Any number of these members 9 may be provided as desired but preferably there is no member 9 extending between the corners 2 of the border frame and adjacent corner of the secondary frame. I have shown a clip of certain form for connecting the brace members between the frames and front for con-

necting the secondary frame to the border frame at the rear. However, this hinged connection of the border frame at the rear may be made in any desired way and any type of clip may be provided for attaching the several parts together in the yieldable relationship described.

The particular feature of this invention resides in the hinged secondary frame having ends parallel with the ends of the border frame and with the front side thereof provided with braces extending between the parts thereby providing a limitedly yieldable frame structure whereby the frame is supported by more than the marginal springs of the cushions with which the frame is to be used whereby great strength is obtained with maximum resiliency.

Having thus described my invention, what I claim is—

1. A frame for spring seats, cushions, mattresses etc., comprising a border frame of wire arranged in substantially rectangular form, a secondary frame substantially U shaped in form spaced from three sides of the border frame and having the legs hingedly connected to the rear side of the border frame to swing about the said edge as an axis, and reinforcing members extending between the border frame and secondary frame along three of the sides thereof and hingedly connected to both the border and secondary frames.

2. A frame for spring seats, cushions, mattresses etc., comprising a border frame, a secondary frame lying therewithin, said secondary frame having a front portion and end portions parallel and in spaced relation with similar portions of the border frame, said end portions being hingedly connected directly to the border frame at the rear side thereof permitting the secondary frame to swing thereon as an axis, and reinforcing members extending between and hingedly connected with both the border and secondary frames.

3. In a frame for spring seats, cushions, mattresses etc., the combination with a border of wire frame, of a secondary wire frame lying within the border frame and in spaced relation with the front side and the ends thereof, said secondary frame being hingedly connected with and adapted to swing about the rear side of the border frame as an axis and reinforcing members extending between the frames along the front side and ends, said reinforcing members each comprising a wire arranged practically in the shape of a V having a flattened apex with the legs thereof hingedly connected at the sides to one of the members and the apex hingedly connected with the other of the said members.

4. A spring frame comprising a border frame, a reinforcing frame therefor having portions extending parallel to and in spaced relation with the front and sides of the border frame, said reinforcing frame terminating at the rear with ends thereof hingedly connected to the rear side of the border frame to swing thereabout as an axis, and additional reinforcing members extending obliquely between the front and sides of the two frames and hingedly connected with both the frames.

In testimony whereof, I sign this specification.

HARRY H. KNEPPER.