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1,456,207

J. M. ADAMSKI

PNEUMATIC CUSHION SEAT

Filed April 4, 1922

Fig. 1.

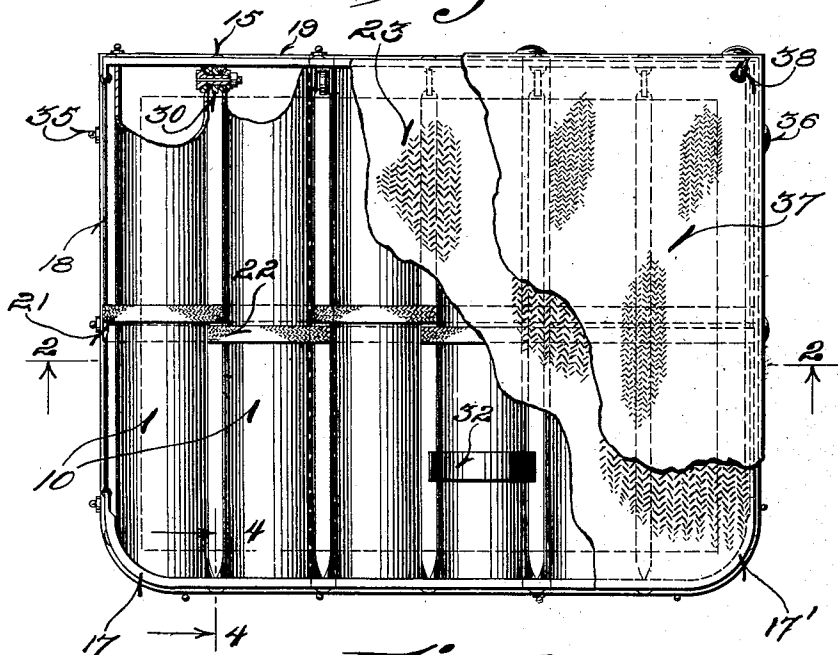


Fig. 2.

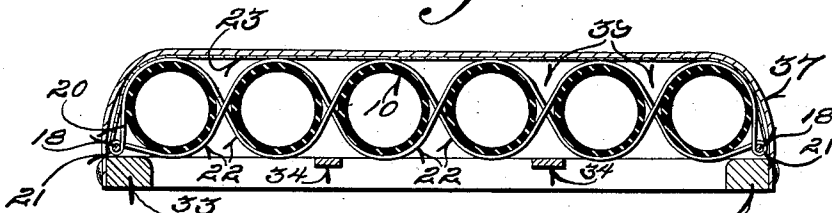


Fig. 3.

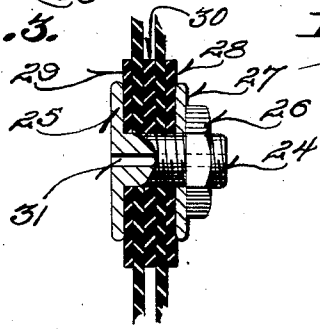
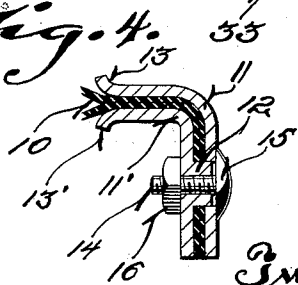


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOSEPH M. ADAMSKI, OF MILWAUKEE, WISCONSIN.

PNEUMATIC-CUSHION SEAT.

Application filed April 4, 1922. Serial No. 549,494.

To all whom it may concern:

Be it known that I, JOSEPH M. ADAMSKI, a citizen of the United States, and resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Pneumatic-Cushion Seats; and I do hereby declare that the following is a full, clear, and exact description thereof.

The invention relates to pneumatic cushions adapted to be inflated.

It comprises a series of parallel elastic tubes communicating with each other, end frames closing the tubes, means for retaining the tubes in proper position, and a cover extending over the tubes.

A primary object of the invention is the provision of a device adapted to be especially comfortable. There are no projecting corners, nor hard uncomfortable surfaces, and the arrangement is such that a proper ventilation is secured, the depression occurring between tubes accomplishing this result.

An object is the provision of a structure operative and durable for a long time. The ends of the tubes are cemented together, and gripped by frame members which are L-shaped in cross section and designed to maintain a clamping action throughout a desirable length of the end of the tube, preventing the escape of air and preventing the abrading or wearing away of the ends of the tubes.

Escapes are provided between the tubes which are also designed to maintain the cushion air tight throughout a long period of time. Clamps are provided and cemented rubber reinforcing members of such nature that there is no cutting of the tubes. A band is looped about the tubes and secured at the sides of the cushion operating to maintain the tubes in proper position, so that the shape of the device is retained despite continued usage.

An important object of the construction is the provision of a device inexpensive to manufacture. The tubes may be made from the old inner tubes of automobile tires. The manner of assembling the tubes and making them air tight is simple and involves but little expense.

With the above and other objects in view which will appear as the description proceeds, my invention resides in the novel

construction, combination and arrangement of parts substantially as hereinafter described and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the herein disclosed invention may be made as come within the scope of the claims.

In the accompanying drawing, I have illustrated one complete example of the physical embodiment of the present invention constructed according to the best mode I have so far devised for the practical application of the principles thereof, and in which:

Figure 1 is a plan view of the device, showing the cushion broken away and revealing the tubes assembled in the frames.

Figure 2 is a cross section on the line 2-2 thereof.

Figure 3 is a detail of an escape, and

Figure 4 is a cross section on the line 4-4 of Figure 1.

A plurality of tubes 10 extend substantially parallel and have their ends received in front and rear frames. Front frame member 11 is provided with a series of apertures and is L-shaped in cross section to cooperate with front frame member 11' of similar shape provided with a series of collars 12, received in the openings. Both of the members are provided with flared inner edges 13-13', so shaped as not to cut the ends of tubes 10 which are received between the members 11-11'. Collars 12 abut closely against contiguous ends of tubes 10, and receive bolts 14, having convex heads 15 contacting with member 11, and tensioned thereagainst by nut 16 which is positioned inwardly of frame member 11', so that there is no projecting point or edge.

The front frame is curved at its ends 17-17', and by means of wires 18, secured to rear frame 19, similar to the front frame in cross sectional view, but being substantially straight across the entire transverse dimension of the cushion. Band 20 is provided with loops 21 securing it to wires 18, and with a series of loops 22, passing about tubes 10 and preventing the displacement of any of the tubes with respect to the others, so that they are at all times maintained in proper position. In accomplishing this purpose, the band 20 is assisted by top 23, which extends over all of the tubes

10 and is secured about the entire periphery of the frame to both the front and the rear frames and wires 18.

Between succeeding pairs of tubes 10, an air escape is provided consisting of a threaded stem 24, having a flange 25 rigid therewith. A nut 26 is adjustable on stem 24 and operates to clamp washer 27 against elastic reinforcement 28, flange 25 compressing reinforcement 29, the reinforcements being cemented to the tubes 10, which are separated by rubber spacer 30 also cemented to the tubes. The construction is such as to prevent possibility of the escape of air, and also to eliminate tendency of the tube to tear away. Stem 24 is provided with a channel 31. Tubes 10 may be provided with a number of elastic bands 32, which reinforce weakened portions thereof and may also be used to repair a puncture, suitable adhesive being spread about the hole and the band 32 being located immediately thereover. The tubes 10, together with their frames 11 and 19, are positioned as a unit upon a base 33 of small transverse dimension, having substantially the shape of the frames and provided with longitudinal braces 34, and a series of spaced posts 35 which are adapted to cooperate with sockets 36 on cover 37, so that a ready means of attaching and detaching the cover is had.

A valve 38 is provided for inflating the cushion, the air passing thru the escapes and expanding tubes 10 to provide a soft and comfortable seat. Tubes 10 may be made of old inner tubes of tires and are thus inexpensive, and the spaces 39 between the tubes facilitate the proper ventilation of the cushion.

I claim:

1. The combination of a series of horizontal tubes lying in substantially the same plane, a pair of oppositely disposed flat metallic portions gripping adjacent ends of said series of tubes, means securing said portions to each other, a second pair of flat metallic portions gripping the other ends of said series, means securing said second pair of portions together, all of said portions lying in substantially the same plane as said tubes.

2. In a device of the class described, the

combination of an elongated metallic band constituting a frame member and L shaped in cross section, part of said band corresponding to one arm of the L lying substantially in a horizontal plane, the other part of said band being downwardly directed therefrom, a second metallic band shaped similarly to said first metallic band and nested within said first metallic band, and a series of inflatable tubes lying substantially in a horizontal plane and having their ends gripped between said bands, said ends extending transversely between said bands.

3. In a device of the class described, the combination of an elongated metallic band constituting a frame member and L-shaped in cross section, part of said band corresponding to one arm of the L lying substantially in a horizontal plane, the other part of said band being downwardly directed therefrom, a second metallic band shaped similarly to said first metallic band, and a series of inflatable tubes lying substantially in a horizontal plane and having their ends gripped between said bands, said ends extending transversely between said bands, the downwardly directed portion of said bands gripping the extreme ends of said tubes, said tubes extending laterally from the horizontal part of said band and lying in substantially the same plane as said horizontal part.

4. In a device of the class described, the combination of a plurality of inflatable tubes, a pair of frame members, one of said frame members having openings therein, the other of said frame members having a plurality of collars thereon, said collars being received between adjacent ends of said tubes, and means for clamping said frame members together.

5. In a device of the class described, the combination of a plurality of inflatable tubes, a pair of frame members L-shaped in cross section and having flared inner edges and means for clamping said frame members against the ends of said tubes.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee, in the county of Milwaukee and State of Wisconsin.

JOSEPH M. ADAMSKI.