(No Model.) 2 Sheets—Sheet 1.

A. & J. SZULEZEWSKI

PNEUMATIC CUSHION.

No. 602,486. Patented Apr. 19, 1898.

Fig. 1

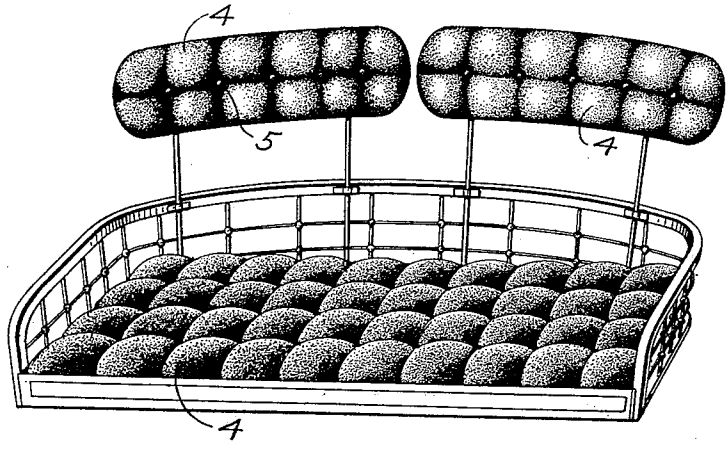
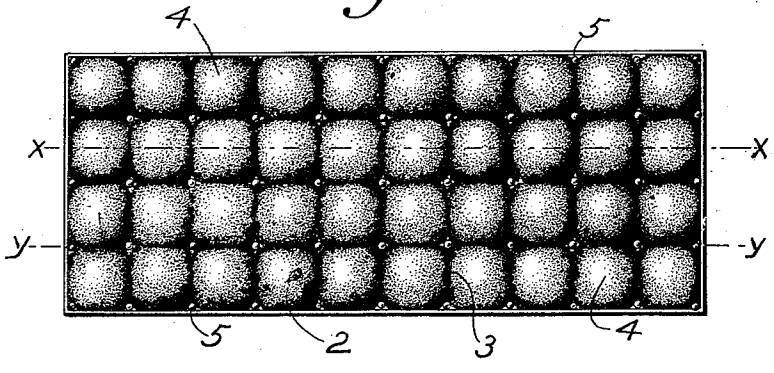


Fig. 2



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R. Lucke

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

A. & J. SZULEZEWSKI.

PNEUMATIC CUSHION.

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Fig. 3

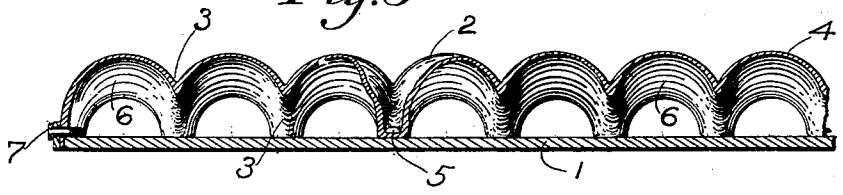


Fig. 4

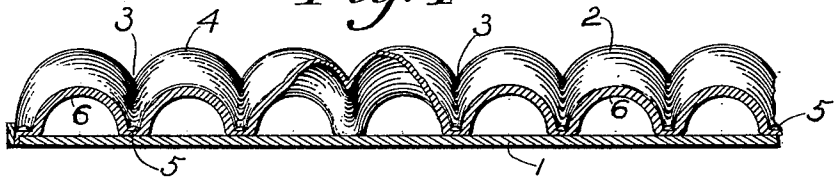


Fig. 5

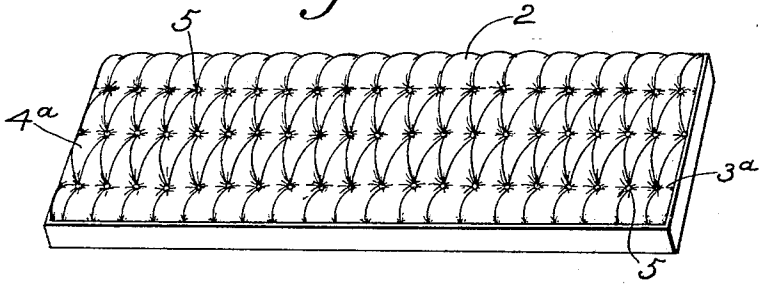
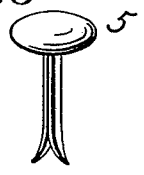


Fig. 6



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UNITED STATES PATENT OFFICE.

ANTONI SZULEZEWSKI AND JOSEPH SZULEZEWSKI, OF SOUTH BEND, INDIANA.

PNEUMATIC CUSHION.

SPECIFICATION forming part of Letters Patent No. 602,486, dated April 19, 1898.

Application filed June 22, 1896. Serial No. 596,413. (No model.)

To all whom it may concern:

Be it known that we, ANTONI SZULEZEWSKI and JOSEPH SZULEZEWSKI, citizens of the United States, residing at South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Pneumatic Cushions, of which the following is a specification.

Our invention relates to pneumatic cushions to be used upon seats, and is especially designed as a seat-cushion for carriages, wagons, beds, lounges, chairs, and like purposes.

The object of our invention is to provide an air-cushion which will be equally soft and pliable over its entire surface, which will yield to a limited degree and only sufficient to adjust itself to the body and provide a comfortable and amply adequate cushion for the purpose specified; and the improvement consists, primarily, in a cushion made of a cross-creased top section providing bulbular or groined cushion protuberances of increased thickness toward the base and a flat base-section connected therewith, which may be conveniently placed and supported upon a seat or bench and which will closely resemble in appearance the ordinary cross-creased and hair-stuffed leather cushions in general use.

In the accompanying drawings, which illustrate our invention, Figure 1 is a perspective view of a wagon or carriage seat having a side and back rail and a back and fitted with our improved pneumatic cushion. Fig. 2 is a plan view of the cushion; Fig. 3, an enlarged sectional elevation of the cushion in line *x x* of Fig. 2 and intersecting the raised portion of the cushion protuberances; Fig. 4, a similar sectional view in line *y y* of Fig. 2 and intersecting one of the depressed or creased portions of the cushion; Fig. 5, a perspective view of a cushion having diamond-shaped creases and protuberances; and Fig. 6, a perspective view of one of the fastening-buttons, enlarged, which are placed at the intersection of the cross-creases of the cushion to hold the top section firmly upon the base-section.

The improved cushion comprises a base-section 1, made of suitable sheet material, preferably flexible—such as leather, canvas, or of leather and canvas combined—and of a top flexible cushion-section 2, preferably made of rubber or rubber-coated and elastic or flexible material pressed or molded with cross-creases 3 therein, which extend squarely across the cushion at right angles to each other and provide rectangular protuberances 4 thereon, as shown in Figs. 1 to 4, inclusive, or which may extend diagonally across the cushion, as at 3^a, Fig. 5, to provide diagonal protuberances 4^a, and said sections are held together by button-fastenings 5, as clearly shown in Fig. 6, and which pass through the top section 2 and also through the base-section 1 at the intersection of the creases to securely hold the said sections together.

The crease depressions 3 in the top cushion-section 2, as clearly shown in Fig. 4 and also as shown in Fig. 3, rest solidly upon the base 1, and the inner spaces between them provide hollow or groined chambers 6, extending across the cushion, which are inflated with air under pressure by suitable means to provide an effective air-cushion.

The adjacent marginal edges of the cushion-sections 1 and 2 are securely united and made air-tight in any well-known manner, and a tubular opening and valved nozzle 7, such as are used upon rubber air-cushion bicycle-tires, are provided, which will admit of the inflation of the cushion by means of an air-pump in a well-known manner.

The bulbular protuberances 4 of the top section 2 are preferably made with an equal thickness of material, gradually becoming thinner at the upper surface of the bulbs and at the base and lower portion of the creases being of sufficient thickness to possess the required rigidity and retain their shape, and the groined structural formation of the top section resting upon the flat base-section will provide sufficient strength and stability to the cushion when inflated with air. This construction also makes the seat softer and more yielding. The top section of the cushion is preferably covered with cloth or other suitable material, and the edges of the cushion may be trimmed with leather binding.

By fastening the rubber to the bottom at equidistant points with the button-fastenings 5, as above described, the top section will be

held down and the upper or top section of the cushion will maintain a rearly plane surface equally supported by fastening devices.

The design or pattern of the molded top section of the cushion can be modified, and the exterior or periphery of the cushion may be made to suit the purpose for which it is intended.

We claim as our invention and desire to secure by Letters Patent—

As a new article of manufacture, a pneumatic cushion comprising a bulbular cover-section having the groined portions of gradually-increasing thickness from the crown to the base and a flat base-section connected to the cover-section, and an inflation tube and valve for filling the spaces with air under suitable pressure, substantially as described.

In testimony that we claim the foregoing as our invention we have signed our names in the presence of two subscribing witnesses.

ANTONI SZULEZEWSKI.
JOSEPH SZULEZEWSKI.

Witnesses:
B. KRUEPER,
R. LUCKE.