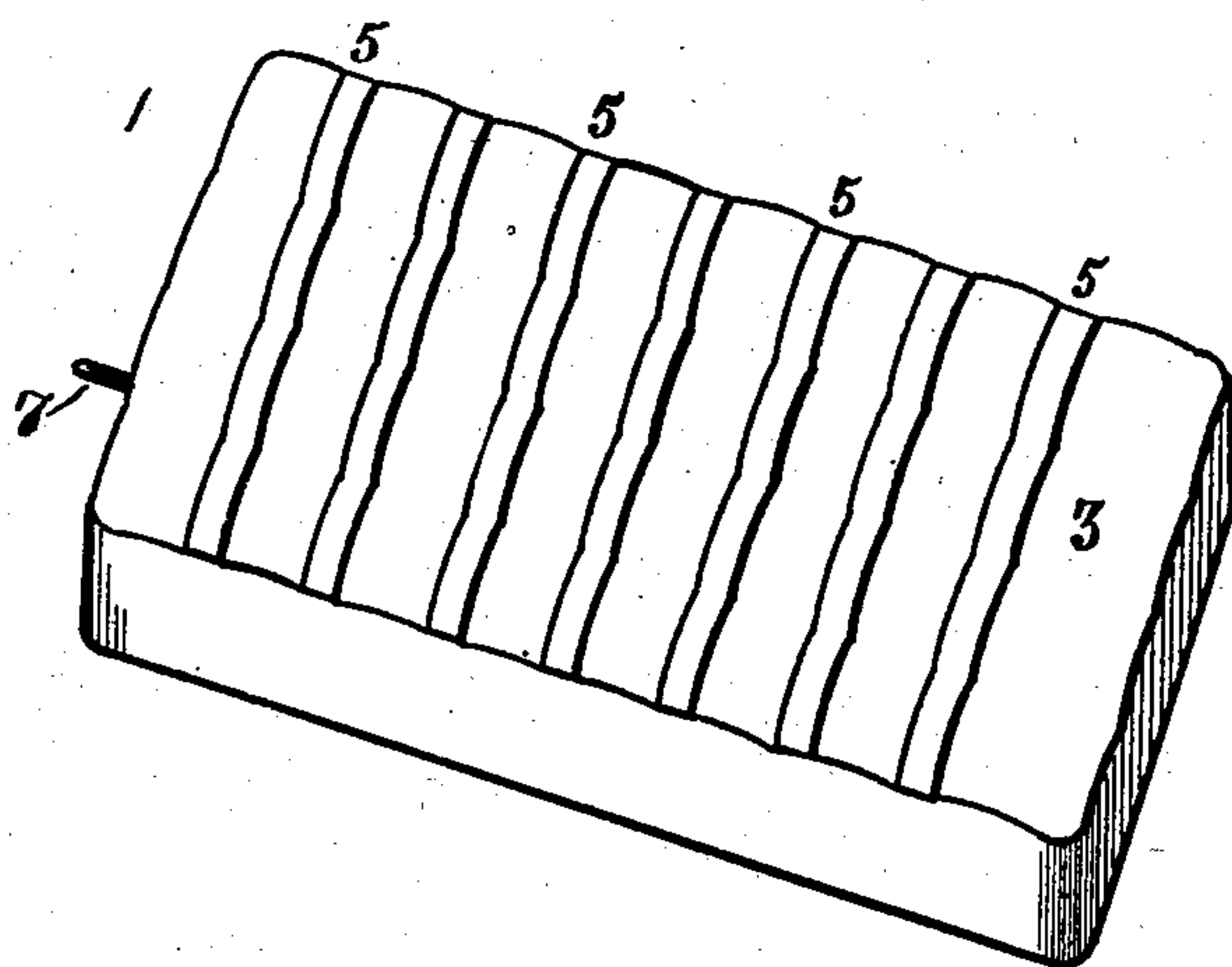


No. 721,192.

PATENTED FEB. 24, 1903.

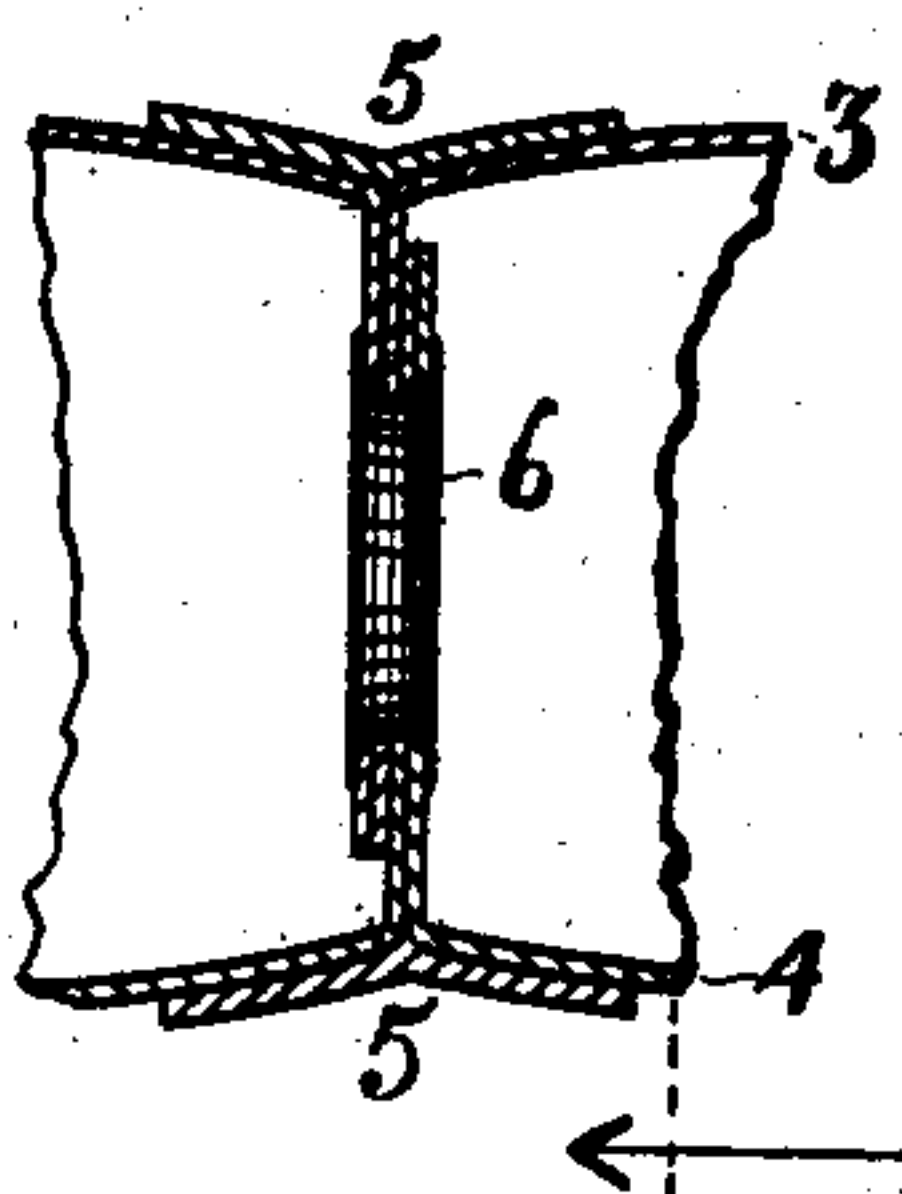
J. HOLLAND.  
RUBBER MATTRESS.  
APPLICATION FILED OCT. 11, 1902.

NO MODEL.

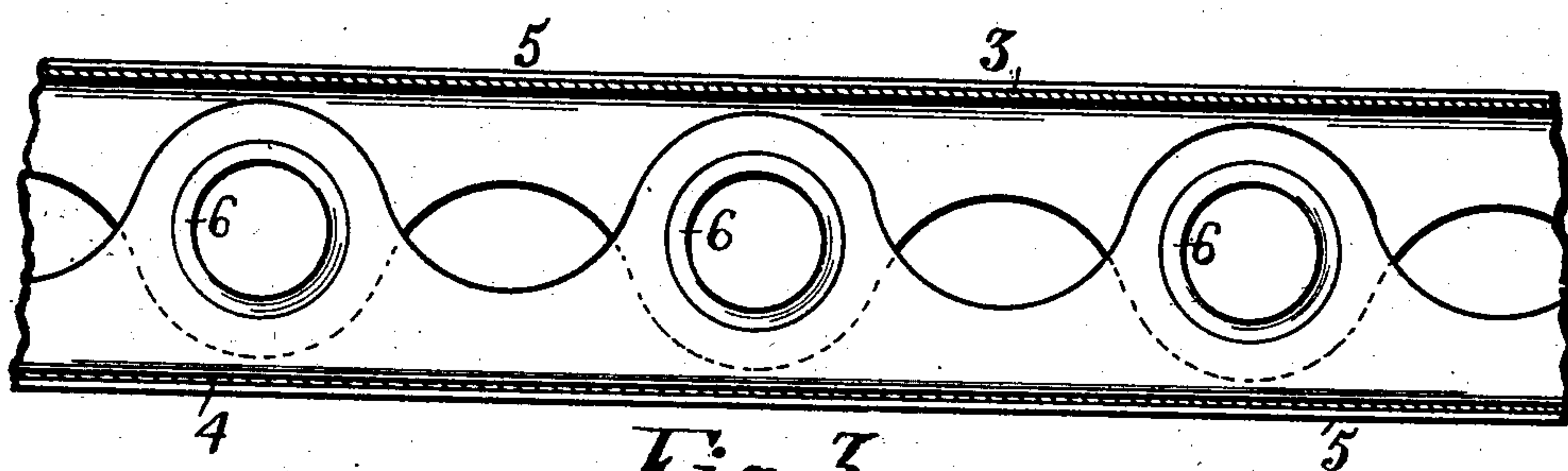
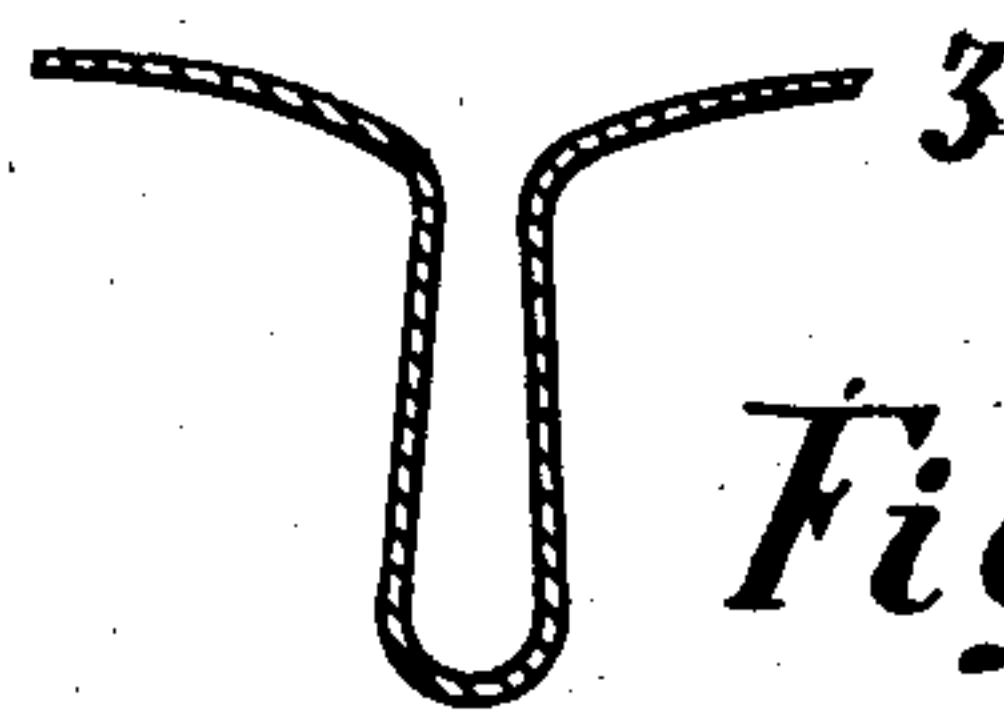


*Fig. 1.*

*Fig. 2.*



*Fig. 4.*



*Fig. 3.*

Witnesses:  
Maude Girister,  
Walter Borman.

Inventor:  
Joseph Holland,  
By C. E. Humphrey  
Atty.

# UNITED STATES PATENT OFFICE.

JOSEPH HOLLAND, OF AKRON, OHIO.

## RUBBER MATTRESS.

SPECIFICATION forming part of Letters Patent No. 721,192, dated February 24, 1903.

Application filed October 11, 1902. Serial No. 126,817. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH HOLLAND, a subject of Edward VII, King of Great Britain, residing at Akron, in the county of Summit and State of Ohio, have invented a certain new and useful Improvement in Rubber Mattresses, of which the following is a specification.

My invention has relation to improvements in the manufacture of inflatable mattresses constructed of vulcanized rubber, and has especial relation to the construction of mattresses having tie-pieces extending from the upper to the lower surfaces, used with a view of strengthening the entire body of the mattress.

The object of my invention is to construct an inflatable mattress capable of being collapsed to pack in a small compass and to be inflated when desired to furnish a safe hygienic cushion for a bed or similar place and to place within said mattress such strengthening devices as will materially tend to their security against too great a movement under the weight of a person and add to their stability.

To the accomplishment of the aforesaid objects my invention consists in the peculiar and novel construction, arrangement, and combination of parts hereinafter described and then specifically claimed, reference being had to the accompanying drawings, which form a part hereof.

In the accompanying drawings, in which similar reference-numerals indicate like parts in the different figures, Figure 1 is a perspective of a mattress involving my invention; Fig. 2, a section of one of the stays to hold the upper and lower parts; Fig. 3, a side elevation of the stays, and Fig. 4 a piece of one of the walls of the mattress to illustrate its position previous to the insertion of the fastening device.

Referring to the drawings, 1 is the mattress, consisting generally of a rectangular frame or box of vulcanized rubber, in one side of which is an inflating-tube 7, by which the mattress may be filled or emptied, as desired. This mattress may be constructed in one piece of rubber or built up of separate pieces, as experience may dictate. In either event it involves an upper surface 3 and a lower sur-

face 4, and the stays by which these two surfaces are bound together are constructed as follows: At regular intervals and transversely across the upper surface 3 and the lower surface 4 the rubber is folded back on itself, similar to a tuck in a garment, and the surplus material forming the tuck or fold is turned within the cavity of the mattress. The abutting faces of this surplus material which forms the fold or the tuck are pressed against each other and vulcanized. In order to add strength to this fold and to prevent their adjacent abutting faces from being pulled apart by a weight placed on the mattress, an additional strip 5 is placed across their point of union and vulcanized in place at the same time that the vulcanization of the mattress takes place. These inturned tucks or folds are designed to extend substantially transversely across the entire mattress, and the upper and lower ones are placed in substantial alinement with each other, so that they will lie side by side, with their faces touching. At intervals through both tucks are placed eyelets or gromets, which serve to hold the upper and lower tucks firmly together, and the portion of the stays intervening between the gromets is preferably cut away, as shown in Fig. 3, to permit the circulation of air lengthwise of the mattress freely. These tucks or folds just described tend to preserve the mattress from too great a strain where the application of pressure is made to a portion of the mattress at one time.

As is well known, the application of pressure to an air-inflated body similar to this mattress at one portion will cause an unusually abnormal expansion at the other portions; but with these tucks in position this is much less liable to cause a break.

In place of gromets or eyelets the portions of the tucks where they overlap may be cemented together or sewed together, as desired, without departing from the spirit of my invention, which is generally a series of inturned tucks, substantially in alinement with one another and attached to each other at intervals.

What I claim, and desire to secure by Letters Patent, is—

1. A pneumatic mattress consisting of a body portion and series of inturned tucks, the



tucks from opposite sides being fastened together.

2. A pneumatic mattress consisting of a body capable of being inflated provided with  
5 inturned tucks from both sides the tucks from both sides being capable of being fastened together.

3. A pneumatic mattress consisting of a body portion capable of inflation, tucks inte-  
10 gral with the body portion extending from opposite sides and means to fasten said tucks together.

4. The combination in a pneumatic mattress, of a series of inturned tucks made by  
15 folding the walls of said mattress back on themselves, the tucks from both sides being in substantial alinement, and means to fasten the tucks from opposite sides to each other at desired intervals.

20 5. The combination in a pneumatic mattress, of a main body portion, inturned tucks extending from both sides made by bending

the material of the sides back upon itself, eyelets or similar means to connect the tucks from opposite sides to each other and rectan- 25 gular strips to cover the point of union made by the forming of said tucks.

6. The combination in a pneumatic mattress, consisting of an inflatable body, in-  
turned tuck extending from the sides thereof, 30 said tucks being integral with the sides from which they project, means to fasten the tucks from opposite sides to each other, and means to permit the passage of air through said united tucks, substantially as shown and de- 35 scribed.

In testimony that I claim the above I here-  
unto set my hand in the presence of two sub-  
scribing witnesses.

JOSEPH HOLLAND.

In presence of—

C. E. HUMPHREY,  
MAUDE ZWISLER.