

(No Model.)

J. E. WRIGHT & T. L. CURLEY.
CUSHION FOR BACK FRAMES OF CARRIAGE SEATS.

No. 561,748.

Patented June 9, 1896.

Fig. 1.

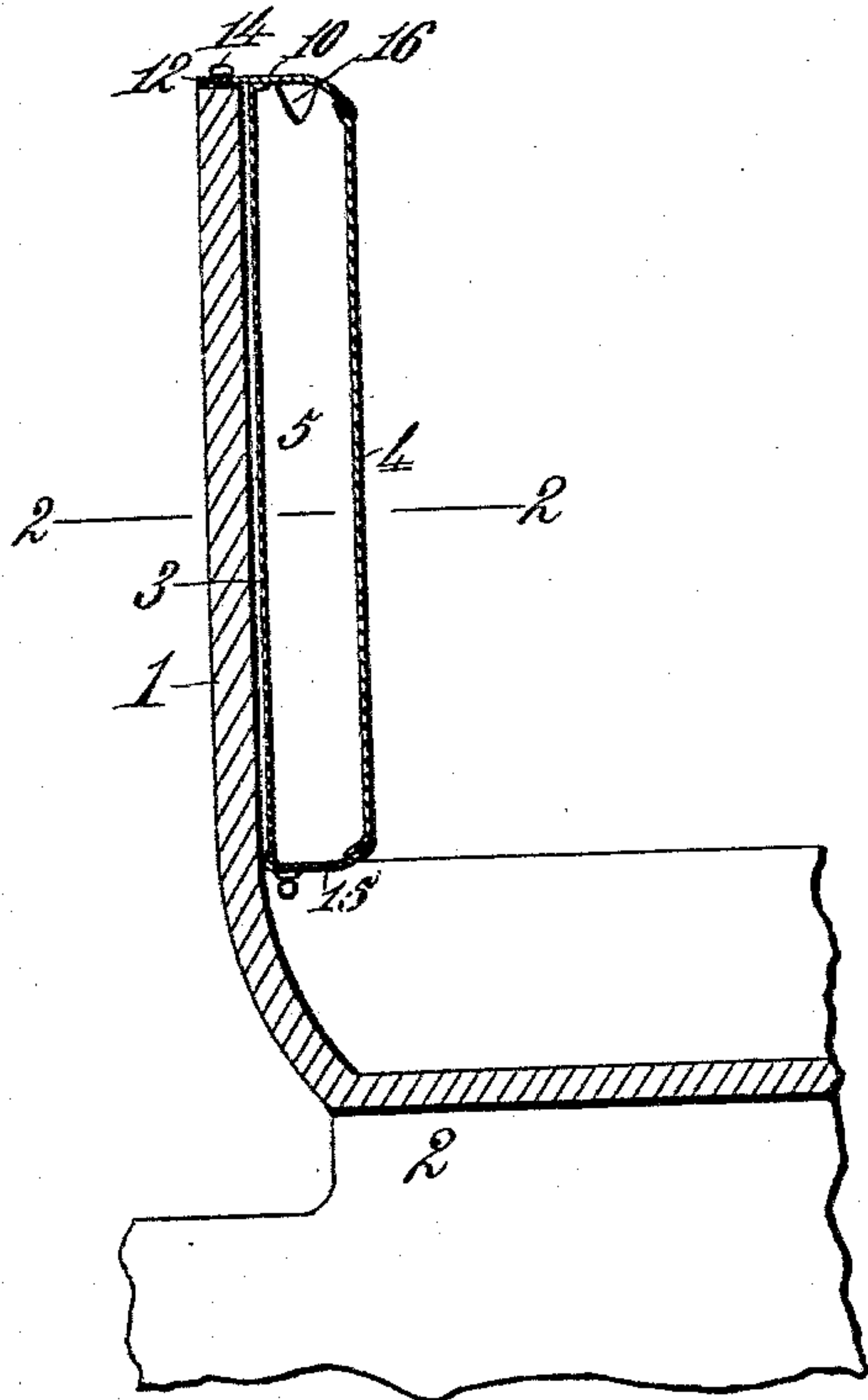


Fig. 2.

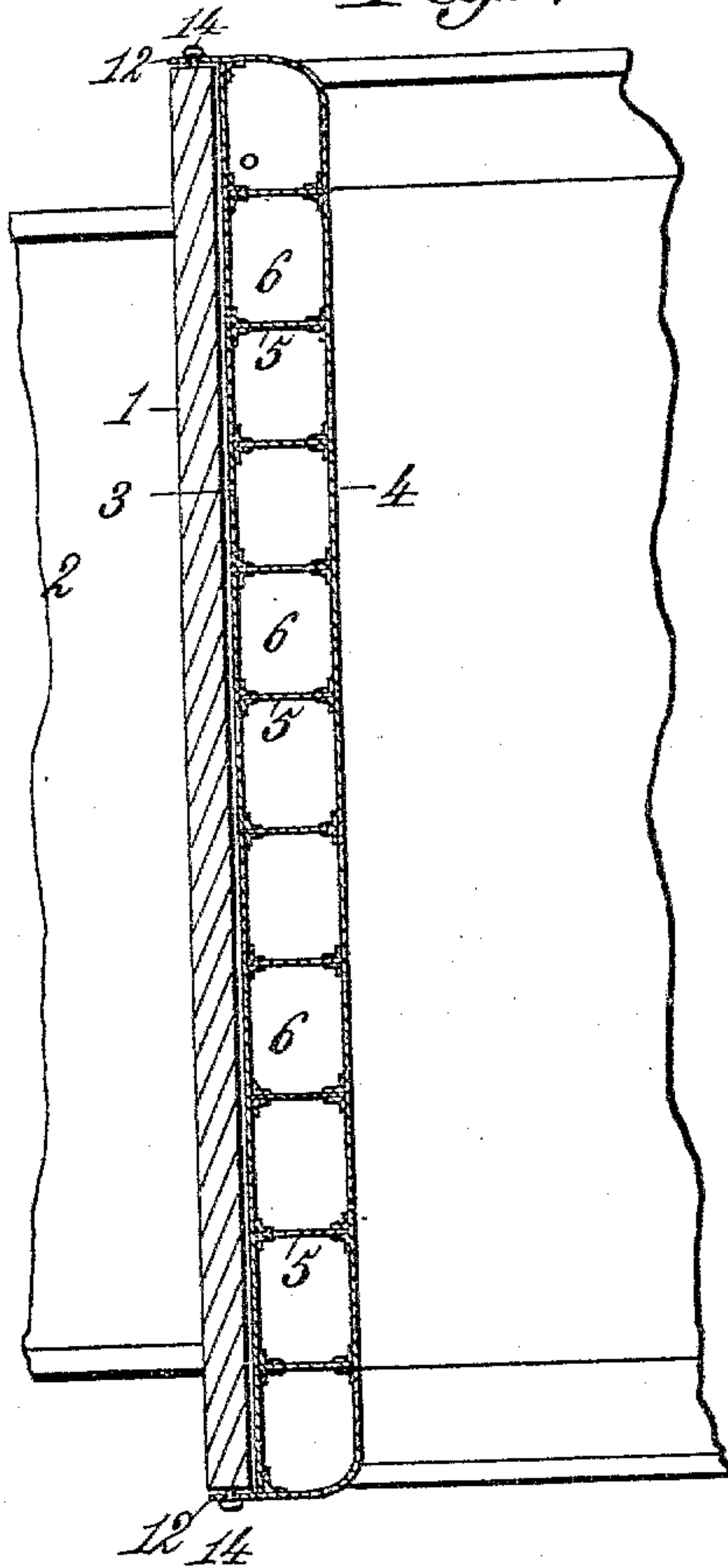


Fig. 3.

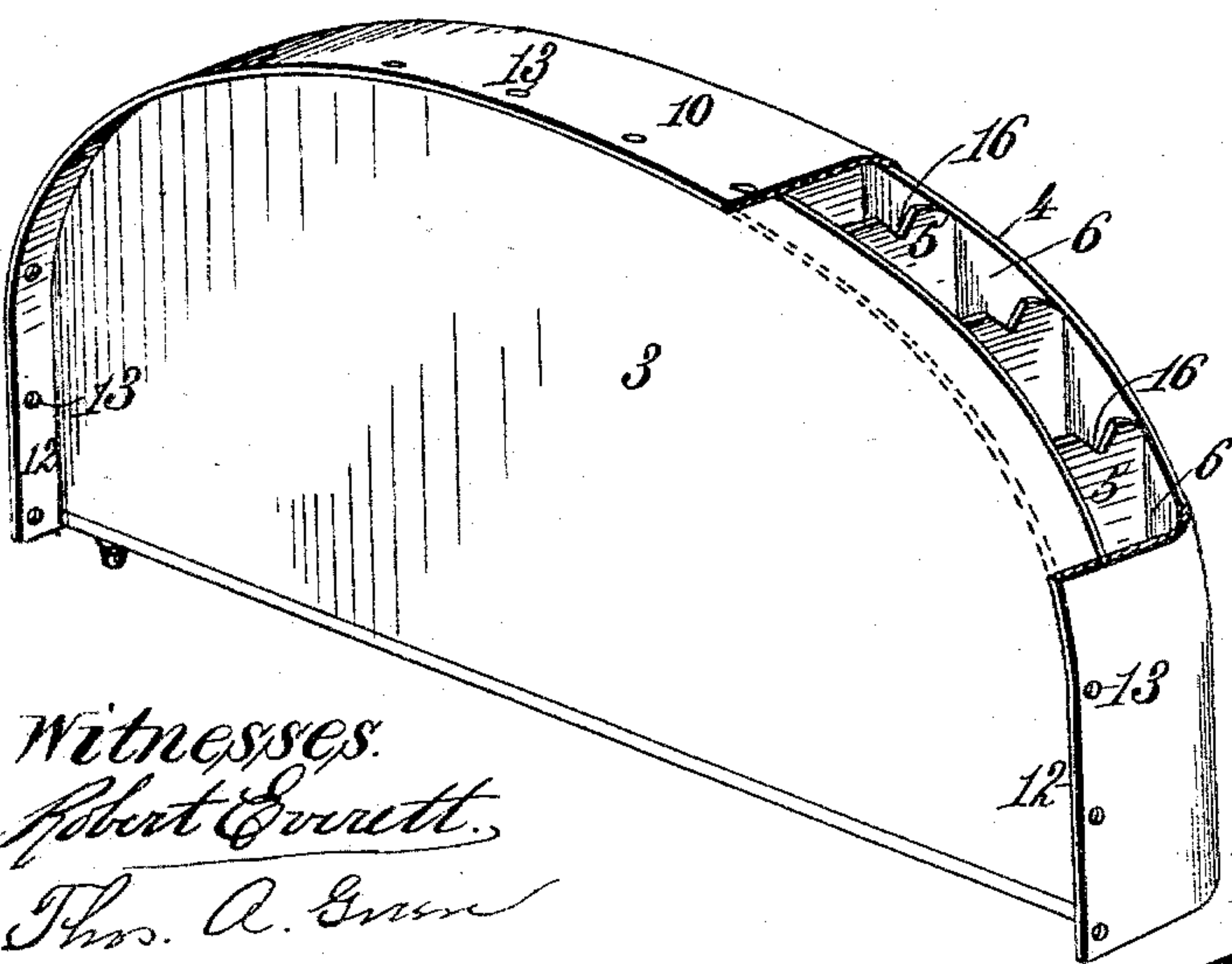
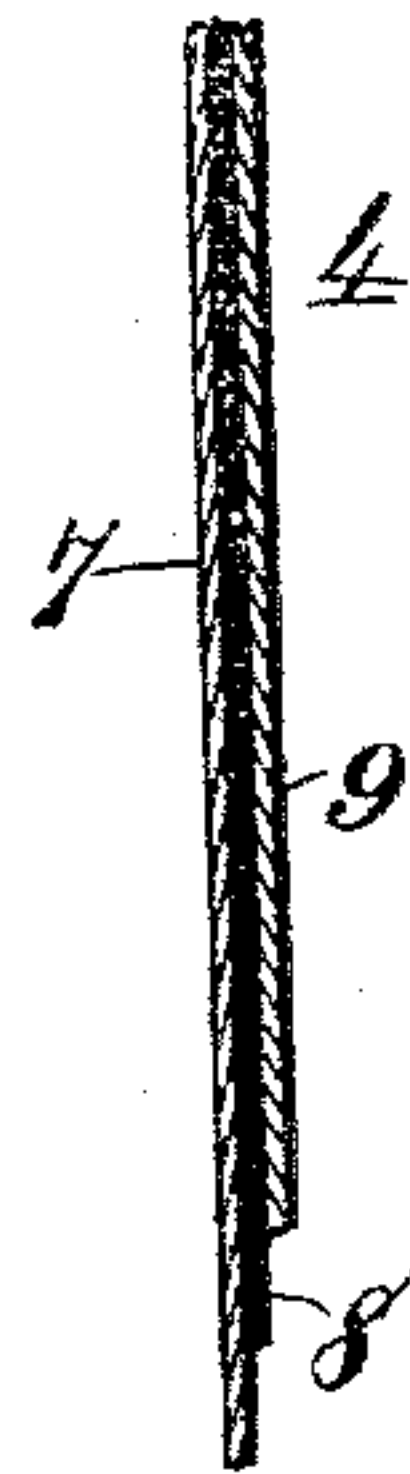


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN E. WRIGHT AND THOMAS L. CURLEY, OF HAMILTON, OHIO.

CUSHION FOR BACK-FRAMES OF CARRIAGE-SEATS.

SPECIFICATION forming part of Letters Patent No. 561,748, dated June 9, 1896.

Application filed November 8, 1895. Serial No. 568,861. (No model.)

To all whom it may concern:

Be it known that we, JOHN E. WRIGHT and THOMAS L. CURLEY, citizens of the United States, residing at Hamilton, in the county of Butler and State of Ohio, have invented new and useful Improvements in Cushions for the Back-Frames of Carriage-Seats, &c., of which the following is a specification.

This invention has for its object to provide new and improved cushions for the back-frames of seats for box-buggies, carriages, and other wheeled vehicles, which is economical and very comfortable in practical use, and possesses the characteristics of coolness, elasticity, lightness, simplicity of construction, variation in compressibility or elastic qualities, and is susceptible of being readily and economically applied, and of being easily covered with cloth or other material, of any desired color or pattern.

To these ends the invention consists in the novel construction and arrangement of parts hereinafter set forth and claimed.

Figure 1 is a vertical sectional view of the back-frame of a box-buggy seat, provided with our pneumatic cushion. Fig. 2 is a horizontal sectional view taken on the line 2 2, Fig. 1. Fig. 3 is a detail perspective view of the improved pneumatic cushion, showing a portion broken away to illustrate the internal partitions; and Fig. 4 is a detail sectional view of a portion of the fabric which we prefer to use in producing the flexible body which composes the cushion.

In order to enable those skilled in the art to make and use our invention, we will now describe the same in detail, referring to the drawings, wherein—

The numeral 1 indicates the back-frame of a seat-frame 2 for a box-buggy, a carriage, or any other wheeled vehicle. The seat-frame and the back-frame of the vehicle may be of any ordinary construction, and for this reason we do not deem it essential to more fully describe the same, as the specific construction thereof is immaterial so far as our invention is concerned.

The improved pneumatic cushion is composed of a hollow inflatable body of flexible material, and, as herein illustrated, this flexible body is composed of an inner layer 3 and an outer layer 4 of flexible fabric, connected

at their inner sides by a plurality of separate partitions 5, of flexible material, for the purpose of forming a plurality of separate air chambers or spaces 6. The inner layer 3 is preferably composed of drilling, surfaced with a rubber compound or any other substance which will fill the meshes, interstices, or pores of the drilling and make the same air-tight. The outer layer 4 is also preferably composed of drilling, surfaced with a rubber or other compound, and upon this compound, while in a raw or plastic condition, is placed an exterior covering of cloth, leather, or any other material desired or suitable for the purpose of forming the exterior of the pneumatic cushion. The rubber compound or other plastic material not only fills the interstices, meshes, or pores of the drilling, but also serves to attach the cloth, leather, or other covering, which latter may be of any color or pattern suitable for the purpose in hand.

In Fig. 4, which is intended to represent a sectional view of a portion of the front layer 4 of the hollow inflatable body, the numeral 7 indicates the drilling, 8 the layer of rubber or other plastic compound, and 9 the exterior covering of cloth, leather, or other suitable material which is to constitute the exterior of the pneumatic cushion.

The top and end edges of the front and rear layers 3 and 4 are connected through the medium of a strip 10, of suitable fabric, which is so applied that the strip extends some distance from the inner layer 3 for the purpose of forming a surrounding marginal flange or rim 12, adapted to be attached to the ends and top edges of the back-frame 1 for the purpose of securing the pneumatic cushion to the back-frame and securing these parts in proper relation to each other. The marginal flange or rim 12 being flexible is susceptible of ready application to the end and top edges of the back-frame, and this flange or rim 12 may be provided with buttonholes 13 for engaging buttons 14, secured to the end and top edges of the back-frame, whereby the pneumatic cushion can be readily applied to and removed from the back-frame whenever occasion demands. We do not, however, confine ourselves to any particular means for attaching or securing the marginal flange or rim 12 to

the edge of the back-frame, as obviously the flange or rim 12 can be secured in position by tacks driven through the flange or rim into the edges of the back-frame, as will be obvious. We prefer, however, to attach the marginal flange or rim to the edges of the back-frame in such manner that it can be readily detached, and for this purpose the buttons and buttonholes may be employed, but obviously other attaching or securing devices can be used without altering the spirit of our invention.

The internal partitions 5 are secured at their vertical edges to the inner and outer layers 3 and 4 in any suitable manner, preferably by pieces of fabric cemented to the partitions 5 and to the inner and outer layers 3 and 4.

The bottom portion of the flexible body is closed by a strip 15, of drilling or other suitable fabric, secured to the bottom edges of the inner and outer layers 3 and 4 for the purpose of closing the hollow body at the bottom thereof.

It will of course be understood that the several parts should be cemented or otherwise secured together in such manner that the seams or joints are perfectly air-tight, so that the atmospheric air or other fluid used in inflating the hollow body will not escape therefrom.

The flexible internal partitions 5 are provided at their upper ends with notches, as at 16, Fig. 3, so that the air chambers or spaces 6 are placed in communication with one another, and when air or other fluid is introduced into the hollow inflatable body such air can pass into all the chambers or spaces. The partitions connect the front and rear layers 3 and 4 in such manner that the front layer 4 is retained in proper position relatively to the rear layer when the hollow body is inflated, and the front portion of the cushion is thereby prevented from unduly bulging out at its central portion, which bulging, if permitted, will produce an objectionable rounded form to the front of the cushion. The partitions also render the body of the structure strong and durable and prevent the parts from becoming disarranged while maintaining the structure in the desired form or shape.

The outline of the hollow inflatable body (represented in Fig. 3) is approximately U-shaped, as it is intended to be applied to a back-frame having rounded corners; but obviously the outline of the inflatable body can be variously modified to meet the conditions required, according to the form or shape of the back-frame to which the cushion is to be applied.

The hollow body can be inflated in any suitable manner—as, for instance, by an ordinary air-pump worked manually, similar to air-pumps used for inflating the tires of bicycles.

Our invention provides a new and improved pneumatic cushion, which is comfortable and economical and is comparatively cool in actual use. The cushion is elastic, light, and simple in construction, and the compressibility or elasticity of the cushion can be varied by introducing more or less atmospheric air into the hollow body. The cushion is also susceptible of being covered with cloth or other material of any desired color or pattern, and it is advantageous over ordinary stuffed cushions, which are expensive, difficult to manufacture, and do not possess all the desired qualities of coolness, elasticity, and lightness.

Having thus described our invention, what we claim is—

1. A pneumatic cushion for the back of a buggy, or other vehicle seat, consisting of a hollow, inflatable body composed of front and rear layers of fabric connected by a plurality of partitions to form separate air chambers or spaces and retain the front layer of fabric in proper relation to the rear layer, and a flexible rim extending continuously around the body and attached to the edges of the front and rear layers and projecting rearwardly to form a flange for attaching the cushion to the ends and top edge of the back-frame of the seat, the said partitions having ports for placing the air chambers or spaces in communication, substantially as described.

2. A pneumatic cushion for the back of a buggy or other vehicle seat, consisting of a hollow, inflatable, flexible body provided with a plurality of internal partitions connecting the front and rear portions of the inflatable body to form separate air chambers or spaces and retain the front portion of the body in proper relation to the rear portion, and a flexible flange or rim extending continuously around and projecting laterally from the margin of the body and provided with buttonholes for detachably engaging buttons attached to the back of the vehicle-seat, substantially as described.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

JOHN E. WRIGHT.
THOMAS L. CURLEY.

Witnesses:
ROLAND A. DAVIS,
R. L. HEDGES.