(No Model.) 2 Sheets—Sheet 1.

W. PETERSEN.

PORTABLE BOTTOM FOR SOFA BEDS.

No. 458,858. Patented Sept. 1, 1891.

Fig. 1.

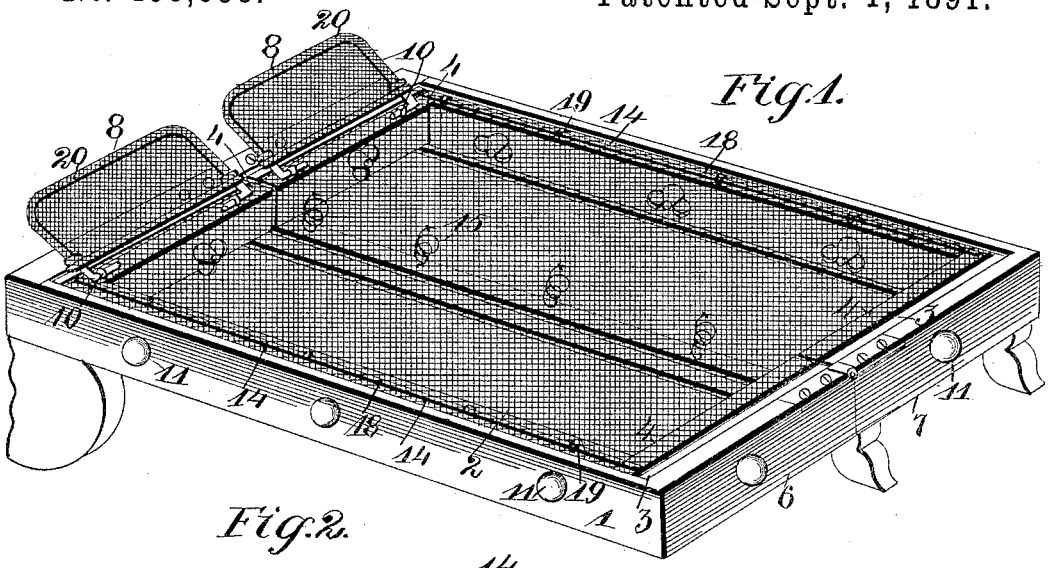


Fig. 2.

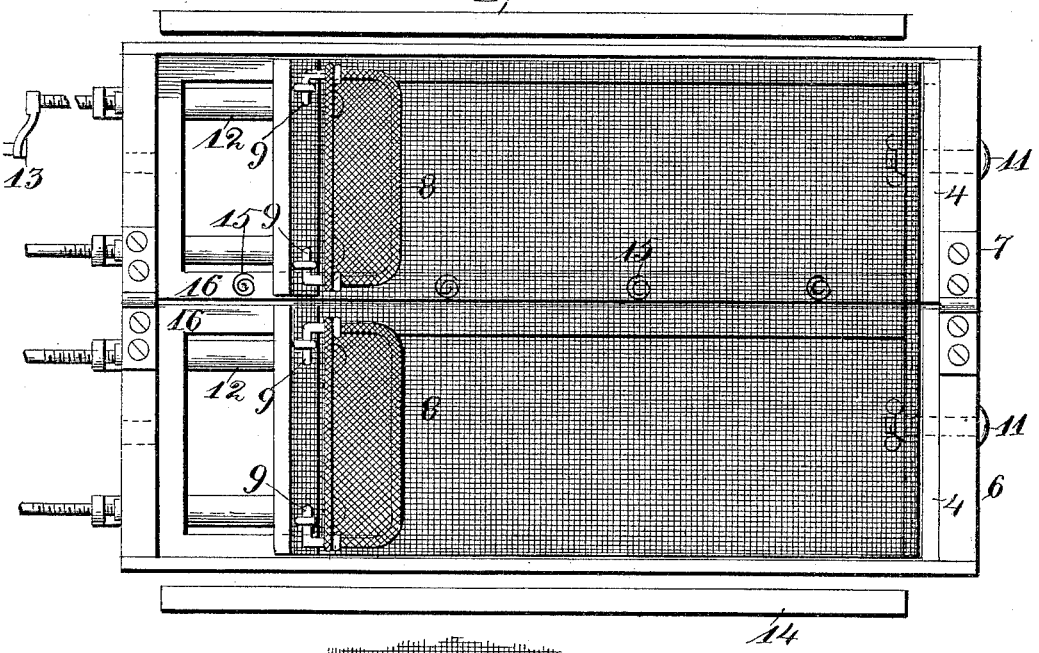
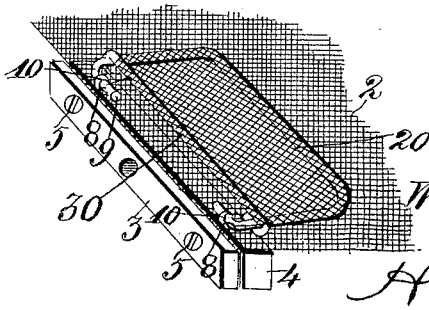


Fig. 3.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

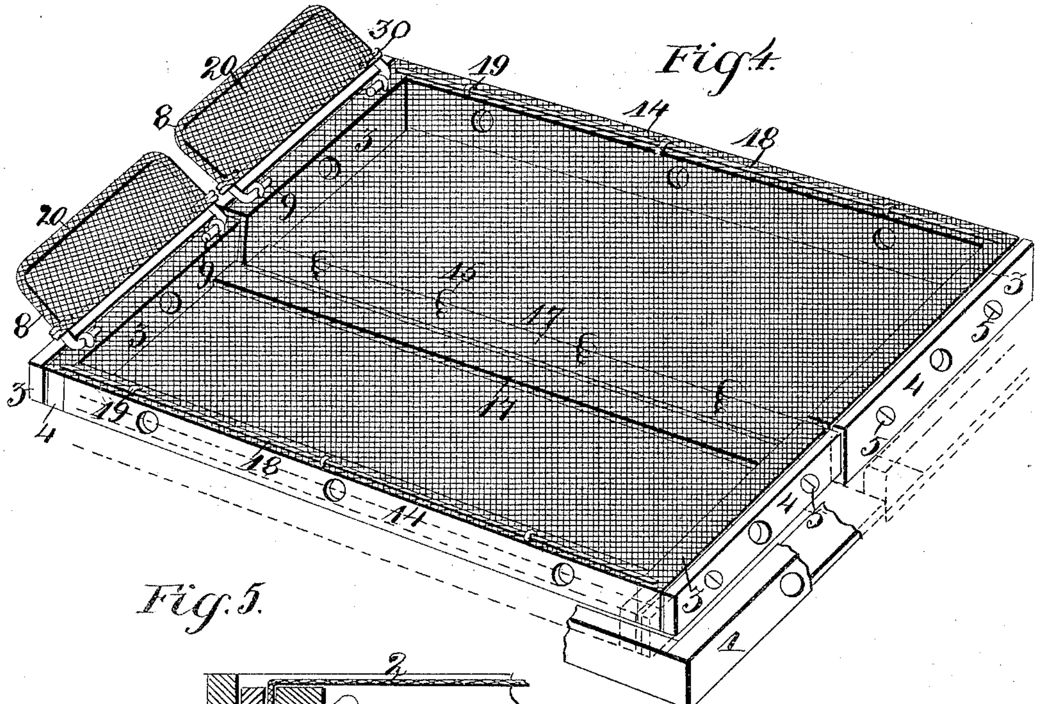


Fig. 5.

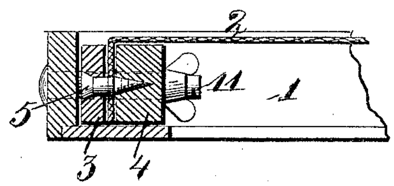
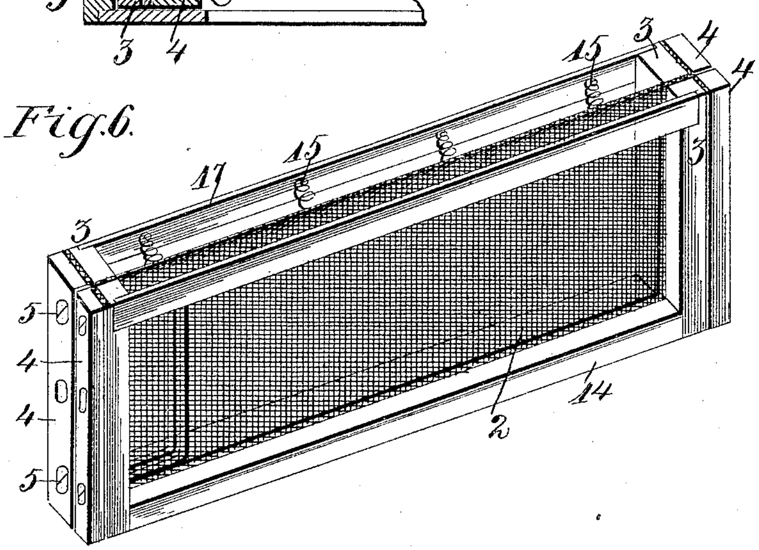


Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLIAM PETERSEN, OF ST. LOUIS, MISSOURI.

PORTABLE BOTTOM FOR SOFA-BEDS.

SPECIFICATION forming part of Letters Patent No. 458,858, dated September 1, 1891.

Application filed August 8, 1890. Serial No. 361,474. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM PETERSEN, of St. Louis, Missouri, have invented certain new and useful Improvements in Portable Bottoms for Sofa-Beds, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to portable bottoms for sofa-beds, the object of which is to provide a cheap, durable, and simple construction by which means the same can be applied to the ordinary sofa-beds now in use; and it consists in the novel combination and arrangement of parts, as will be hereinafter fully described, and designated in the claim.

In the drawings, Figure 1 is a perspective view of my complete invention as applied to the ordinary sofa-beds now in use. Fig. 2 is a top plan view of the same, showing the manner in which the bed is applied to the ordinary sofa-frame. Fig. 3 is a perspective view of one set of the cross-pieces detached having a pillow attached thereto. Fig. 4 is a perspective view of a modification of my invention, showing the bed in a complete form and ready to be placed in the sofa-frame. Fig. 5 is a vertical cross-section of the removable frame and sofa-frame, illustrating the manner of fastening the same together; and Fig. 6 is a perspective view of the bed detached from the bed-frame and in a closed position.

The object of my invention is to attach to the ordinary sofa-beds now in use a bottom that can be easily and quickly attached to the same and also one that can be readily removed for the purpose of cleaning.

This invention further consists in attaching to the cross-pieces at one end thereof two hinged pillows which are adapted to be readily folded or closed upon the bed when not in use, allowing the said bed to be closed upon itself when the bed is to be used as a sofa.

Referring to the drawings, 1 represents the ordinary sofa-bed, the two sections of which are hinged together in the usual manner.

2 represents the woven wire or wire-netting, which is cut somewhat shorter than the frame of the sofa-bed, in order that the same be tight when stretched the entire length of the frame, as best illustrated in Fig. 2. The bed is composed of a single sheet of woven wire, the width of which corresponds to the width of the sofa when open, the ends of the said wire being clamped firmly between two transverse bars 3 4 by means of screws 5, passing through the said bars and wire. The transverse bars 3 and 4 correspond in length with the width of the sections 6 and 7 of the bed-frame, the woven wire itself forming the hinge for the bed-bottom and also forming a joint for the said transverse bars. To two of the transverse bars 4 4 are fastened two pillow-frames 8, which are formed of wire suitably bent to conform to the shape for which they are designed, the ends 9 of the said wires next to the bed 2 being bent, the ends of which project toward one another, and the same secured to the bars 4 4 by means of staples 10. To the pillow-frames 8 are secured bars 30 immediately above the bent portions 9 thereof for strengthening the same, and to which the netting 20 is secured, by means of which the said bar performs two functions. The transverse bars 3 and 4 opposite to the ones carrying the pillows are first secured to the foot-sections of the sofa-frame by means of bolts 11, and when so fastened to the same the woven wire 2 will extend nearly the length of the sofa-frame. The woven wire 2 is stretched the entire length of the bed-frame by means of ordinary hand-clamps 12, the transverse pieces 3 4 and sofa-frame being interposed between them and the handles 13 of the said clamps turned until the said bottom is thoroughly stretched and brought into position, as shown in Fig. 1.

When the woven-wire bottom is stretched in its proper position, a suitable number of bolts 11, like those previously described, are passed through suitable openings formed in the transverse bars 3 4 and that end or the head of the sofa-frame firmly holding the bottom in a stretched position.

14 14 represent two longitudinal bars, which are inserted after the bottom has been stretched and fastened, the ends of which bear against the transverse bars 4 and provide a further means of fastening, the said longitudinal bars being fastened to the sides of the sofa-frame by means of bolts 11.

A suitable number of coiled springs 15 are secured to the longitudinal pieces 16 of the sofa-frame, the opposite ends of which are

fastened to the woven bottom 2, which acts as a support for the center of the said bottom and yet affords a sufficient amount of elasticity.

In the construction as above described the bottom for the sofa is completely made within the frame of the said sofa, and is so constructed that it can be removed at any time for the purpose of cleaning the same and afterward replaced with but very little trouble. The hand-clamps used for this purpose are of the ordinary kind, and when the bottom is sufficiently stretched they are removed after the bolts have been inserted in their proper position.

In the modification shown in Fig. 4 a bottom is illustrated of like parts, the frame of which is completed before the woven wire is stretched and made to fit the frame of the sofa. Longitudinal pieces 17 are secured directly to the under surface of the transverse pieces or bars 4, one of which provides a seat for the coiled springs 15 and takes the place of the longitudinal bars 16, for the same purpose as previously described in the other construction. The longitudinal bars 17 in this construction provide means for bracing and strengthening the bottom as well as forming a seat for the springs. After the bed-bottom has been stretched in position a stiff length of wire 18 is passed through the meshes of the wire at the edge thereof and the same fastened to the longitudinal bars 14 by means of staples 19, which prevents the bottom from sagging in a transverse direction.

I am aware that prior to my invention the woven wire which constitutes the bottom of the sofa has been clamped between two transverse bars for holding the same to be stretched, also that coiled springs have been used for supporting other forms of bed-bottoms.

Over the pillow-frames 8 is stretched any suitable wire-netting 20, which provides a cover for the said frames, and upon the netting any kind of soft material may be attached for the purpose of forming a pillow.

By preference the transverse bars 3 4 in Fig. 4 are cut somewhat shorter than those shown in Fig. 1, by which means the wire-netting or bottom can be successfully stretched transversely when the bolts 11 are tightened, as shown in dotted lines. Should the transverse bars 3 4 in Fig. 4 be accidentally cut shorter than was intended, or the bottom so constructed somewhat narrower than the sofa-bed frame, the woven wire 2, being elastic, will give sufficiently to allow the said bottom to be stretched transversely across the sofa-frame, which is capable of being so drawn by dispensing with hinges commonly employed to connect the said transverse bars, the wire bottom itself proper forming the hinge for the sections. As also illustrated in Fig. 4, the sections of the bed-bottom and bed-frame which are to be folded upon the remaining sections are narrower and thinner than the others, and, as shown in dotted lines, the recess in the wider and thicker section of the frame for the reception of the portable bottom is greater in depth than that in the narrow section. It will be noticed that by pivoting the pillow-frames to transverse bars above the level of the woven wire 2 the weakening of the latter by slots for the passage of the ends of the frame is prevented, and that the pillow can be laid close down against the woven wire 2, permitting the two parts of the bed to be folded together, and it will also be seen that the frame of the pillow will when opened rest against the head of the external frame of the sofa.

I am aware that prior to this invention pillows have been made by pivoting a wire frame below the level of the wire-netting of the bed; but as this construction necessitates the passage of the arms of the frame-work through slots in the netting it is objectionable for the reasons before stated, and also as it renders it difficult to lay the pillow flat thereon, and I do not therefore desire to claim such a construction; but

What I do claim is—

In a sofa-bedstead, the combination of the woven wire 2, clamped between two transverse bars 3 and 4, the pillow-frames 8, having bent ends 9 facing one another and strengthening-bars 30, to which the wire-netting 20 is secured, staples 10, carried by transverse pieces 4 for receiving the bent ends of the said pillow-frames, the longitudinal bars 14 14, interposed between the transverse pieces 4 4, the wire 18, secured to the said longitudinal pieces 14 by means of staples 19 for securing the sides of the wire-netting, bolts 11 for securing the bed to a suitable frame, and the springs 15, interposed between the wire-netting and one of the flat longitudinal pieces 17, carried by the transverse bars 4, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM PETERSEN.

Witnesses:
C. F. KELLER,
JNO. C. HIGDON.