F. G. GALE & R. O. HOPKINSON.

BED BOTTOM FABRIC.

APPLICATION FILED OCT. 16, 1914. RENEWED APR. 1, 1918.

1,283,722. Patented Nov. 5, 1918.

Fig. 1.

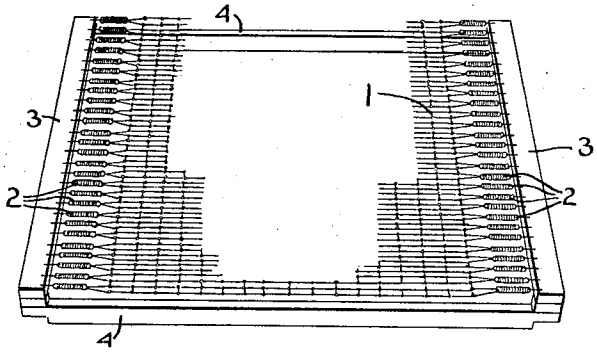


Fig. 2.

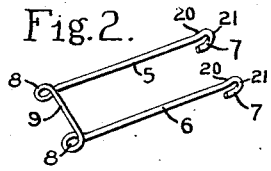


Fig. 4.

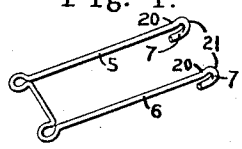


Fig. 6.

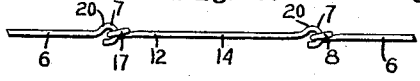


Fig. 3.

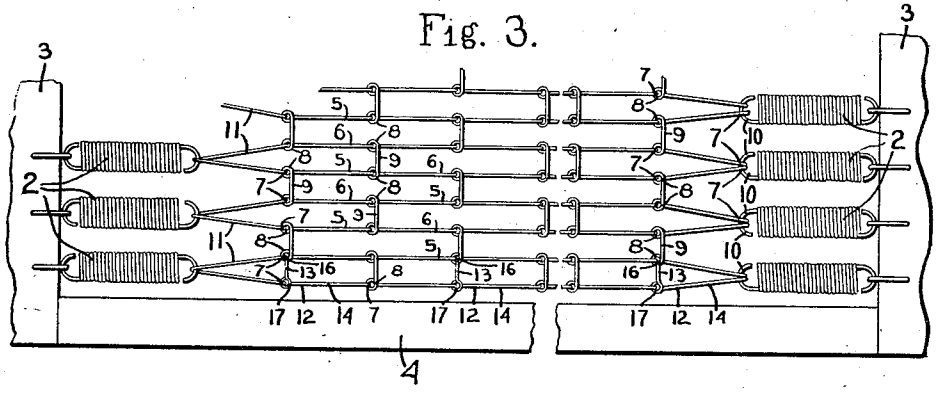
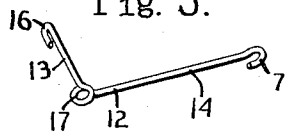


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

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BED-BOTTOM FABRIC.

1,283,722. Specification of Letters Patent. Patented Nov. 5, 1918.

Application filed October 16, 1914, Serial No. 867,022. Renewed April 1, 1918. Serial No. 226,064.

To all whom it may concern:

Be it known that we, FRANCIS G. GALE and RICHARD O. HOPKINSON, subjects of the King of Great Britain, and residents of Waterville, Province of Quebec, Dominion of Canada, have invented an Improvement in Bed-Bottom Fabrics, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

This invention relates to wire bed bottoms and has for its object to provide a novel bed bottom fabric which is very elastic and pliable; which is so constructed that a weight on the central portion thereof will be transmitted to a number of the springs at each end with the result that the bed bottom will not sag materially under the weight, but the latter will be distributed transversely throughout the bed bottom, and to otherwise improve bed bottoms, all as will be more fully hereinafter described and then pointed out in the appended claim.

Referring to the drawings wherein we have illustrated a selected embodiment of our invention, Figure 1 is a perspective view of a bed bottom made in accordance with our invention;

Fig. 2 is a perspective view of one of the links used in making the bed bottom;

Fig. 3 is an enlarged fragmentary plan view of a portion of the bed bottom embodying our invention;

Fig. 4 shows another form of link embodying our invention.

Fig. 5 is a view of one of the links used to complete the edge of the fabric.

Fig. 6 is a fragmentary side view, showing the manner of connecting the link of Fig. 5 with the other links.

Our improved bed bottom, which is shown generally at 1, is sustained on a mattress frame of any suitable or usual construction comprising the end rails 3 and the side rails 4 which are suitably connected together. The resiliency is provided for by the coiled springs 2 at each end thereof, which springs are connected to the end rails 3, as usual in bed bottoms of this general character.

The bed bottom 1 is made up of a plurality of connected links which are conveniently made of wire, and each of which presents two substantially parallel side members connected at one end by means which provides two hook-receiving seats adjacent the ends of the side members, the other ends of the side members being hooked into seats of other links. These links are arranged in rows extending transversely of the bed bottom, and the hooks of each link are hooked into the seats of two adjacent links in the next row. One form of link embodying our invention is illustrated in Fig. 2 and it is made from wire bent to form the two sides 5 and 6 and the connecting portion 9 by which the sides are united at one end of the link, this connecting portion being connected to the sides 5 and 6 by a loop portion 8. The free ends of the sides 5 and 6 are bent to form hooks 7. The loops 8 constitute hook-receiving seats, and in the embodiment of the invention shown in Fig. 2 each loop is formed by bending the end of the leg or side inwardly, forwardly, outwardly, and then inwardly again to cross the leg, thus making a closed loop, and the portion 9 connecting the loops is straight.

In assembling the bed bottom fabric the links are arranged in rows extending transversely of the bed bottom, and the hook 7 of the leg 5 of each link is hooked into the seat 8 of one link of the next row, and the hook 7 of the leg 6 of the first-named link is hooked into the seat 8 of an adjacent link. As a result, the links in adjacent rows have a staggered relation relative to each other, or in other words, the seat portions 8 of any one link receive the hooks 7 of two adjacent links in the next row, and the hooks 7 of any link in one row are hooked into the seat portions 8 of two adjacent links of the next row. At one end of the fabric the links are directly connected to the springs 2, the hooks 7 of the links being engaged with the hook portions 10 of the springs. There preferably will be one spring 2 for each link of the end row, and each spring will be connected to two adjacent links, as best seen at the right in Fig. 3, said links being spread somewhat to permit them to be connected to the springs. At the other end of the fabric or at the left hand in Fig. 2, the links are connected to the springs 2 through special V-shaped link members 11, each V-shaped link having its apex secured to the spring 2 and the ends of its arms formed into hooks similar to the hooks 7 that are engaged in the seat 8 of the next row of links. The edge of the fabric may be finished by special L-shaped links 12, as shown in Figs. 3 and 5, each link having

a long arm 14 provided with a hook 7, a short laterally-extending arm 13 terminating in a hook 16, and a loop 17 at the junction of said arms. The hook 7 is hooked into the outside seat 8 of the end link in one row and the hook 16 is hooked into the outside seat 8 of the end link of the next adjacent row, while the loop 17 receives the hook 7 of the end link of another row. The edge of the bed bottom is thus made up of the links shown in Fig. 2 and the special links 12 arranged alternately. This makes a very desirable edge of the fabric which is stiff and will not stretch.

In Fig. 4 we have shown another form of link which is similar to that shown in Fig. 2 except that the hook-receiving seats 8 are formed without crossing the wire. In other respects, however, the construction shown in Fig. 4 is similar to that shown in Fig. 2. One of the advantages of this construction is that whenever weight is applied to any portion of the bed bottom fabric, such weight will be distributed from the point of application in diagonal directions, and, therefore, a plurality of springs 2 at each end of the fabric will come into play and assist in supporting the weight. This prevents the fabric from sagging at the center.

The construction of the links illustrated also has the advantage that they prevent the fabric from stretching transversely in the center, for the free ends of adjacent links are connected together in a transverse direction by the connecting member 9 of the link in the next row.

In making the seat portions 8 we propose to so bend the wire of which the links are formed that the central portion of the seat with which the hook 7 engages will be in the line of the side 5 or 6 of the link. This construction insures that pulling strain will be transmitted from one link to another in a straight line and that the arms of the connected links will be in line with each other. In order to provide a construction in which the arms 5 and 6 of the links will occupy the same plane, we propose to make the hooks 7 of the shape best seen in Fig. 2, that is, the legs are first bent upwardly slightly, as at 20, and then are bent into hook shape so that the part 21 of the hook which engages the seat 8 of the next adjacent link will be in line with the arm of the link.

We claim:

A bed bottom fabric composed of connected links arranged in rows extending transversely of the fabric, each link presenting two substantially-parallel sides having hooks at one end and integrally connected at the other end, the sides of each link being formed at their connected ends with hook-engaging seats situated in line with the sides, the links of one row having a staggered relation to the links of the next adjacent row so that the hooked ends of each link hook into the seat portions of two adjacent links in the next adjacent row, each longitudinal edge of the fabric being formed of the above-mentioned links and L-shaped links alternating in position, each L-shaped link presenting hooks at the ends of its arms and a hook-receiving seat at its apex.

In testimony whereof, we have signed our names to this specification in the presence of two subscribing witnesses.

FRANCIS G. GALE.
RICHARD O. HOPKINSON.

Witnesses:
ALEXINA JONCAS,
VIOLA KEES.