

Whitehead & Kittle,

Eed Bottom,

Nº 29,846,

Patented Aug. 28, 1860.

Fig 1.

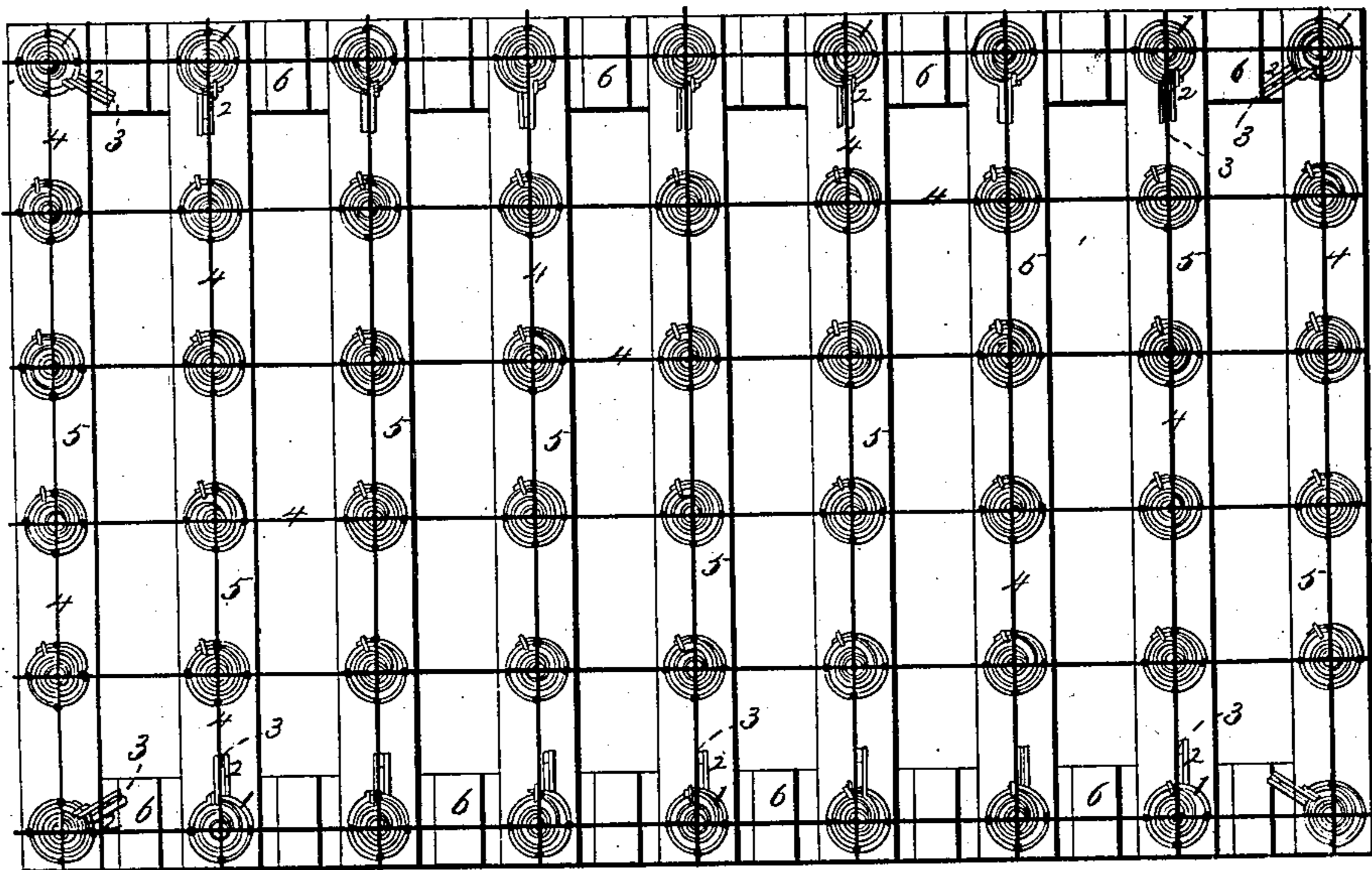


Fig 2.

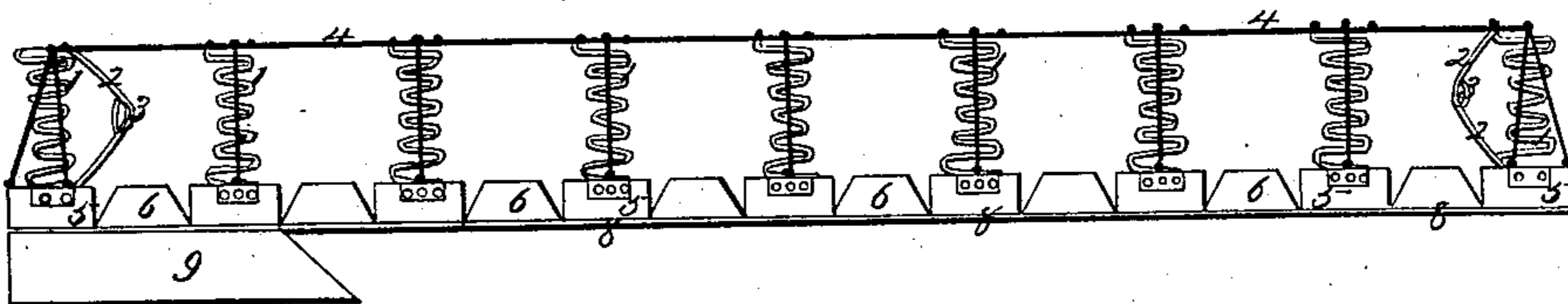


Fig 3.

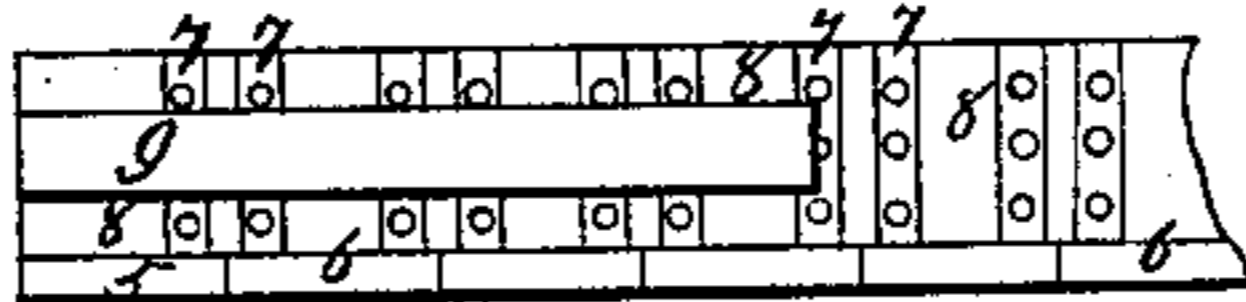


Fig 4.

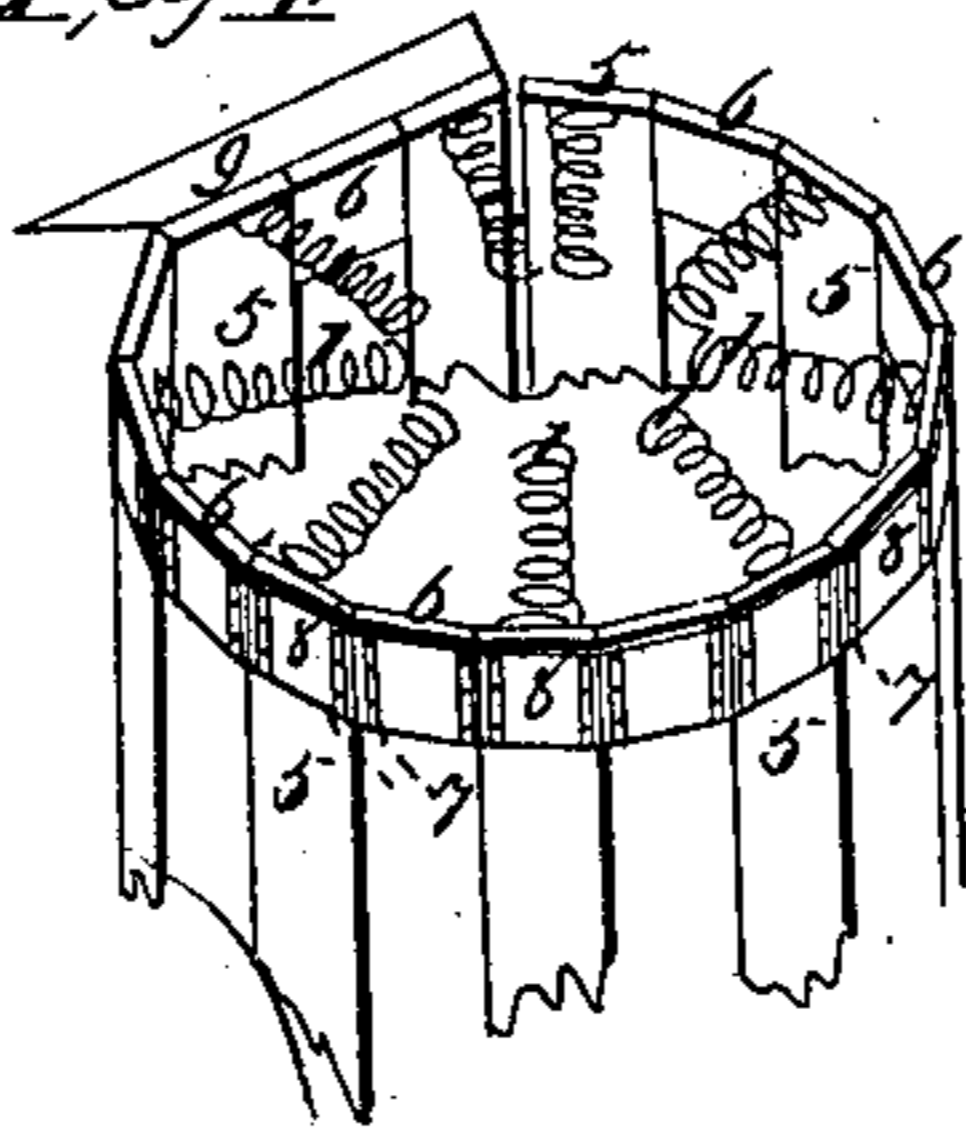
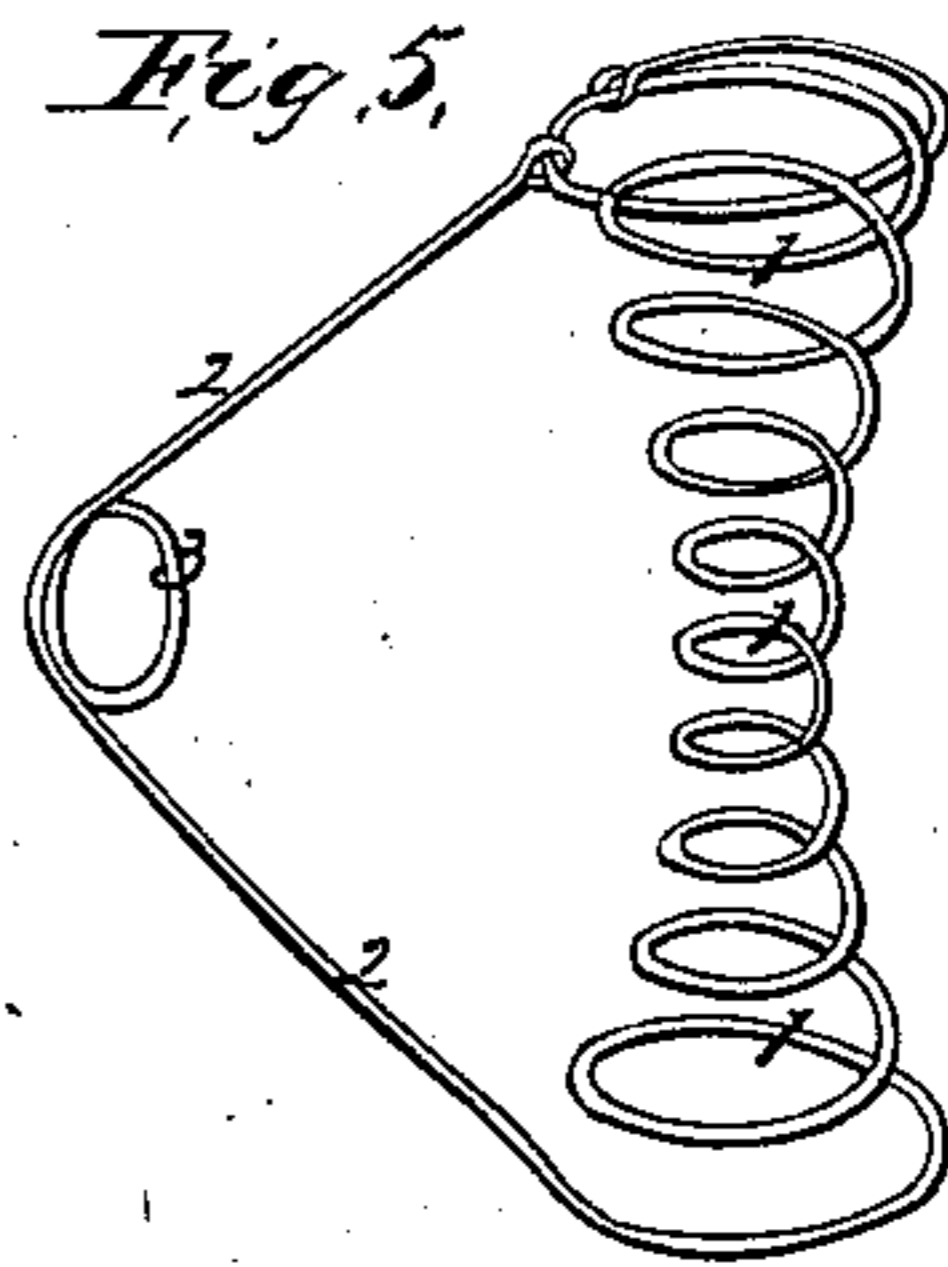


Fig 5.



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UNITED STATES PATENT OFFICE.

LEWIS WHITEHEAD AND SAMUEL P. KITTLE, OF NEW YORK, N. Y., ASSIGNORS TO S. P. KITTLE, OF SAME PLACE.

SPRING-MATTRESS.

Specification of Letters Patent No. 29,846, dated August 28, 1860.

To all whom it may concern:

Be it known that we, LEWIS WHITEHEAD and SAMUEL P. KITTLE, of New York, in the county of New York and State of New York, have invented certain Improvements in the Construction of Spring-Mattresses, Bed-Bottoms, Sofas, and Similar Articles of Manufacture, the construction and operation of which we have described in the following specification and illustrated in its accompanying drawings with sufficient clearness to enable competent and skilful workmen in the arts to which it pertains or is most nearly allied to make and use our invention.

Our said invention consists in, first, combining a spring brace constructed as hereinafter described, with a spiral spring for the purpose of securing lateral stability at the edges and corners of the bed bottom, mattress, sofa, or other like article, as hereinafter more fully set forth; second, the combination with the slats upon which the springs are secured, of beveled intermediate blocks and hinges, forming together an internal stop hinge to give the proper form to the mattress, &c., when rolled up into a compact form, substantially as set forth; third, the combination with the head slats of a head piece beveled in such a manner as to underlie and support the intermediate block which unites one of the slats to which the said head piece is attached, to the next below it, as set forth.

In the accompanying drawings, Figure 1 is a plan of our improved bed bottom or mattress. Fig. 2 is a side elevation of it. Fig. 3 is an underside view in detail, showing the construction and position of the head piece, and the mode of attaching strips of canvas to form the hinge. Fig. 4 is a perspective view showing the position of the parts in the frame when rolled up. Fig. 5 is a perspective view of the spring brace and spring.

It is well known that the springs which form the side row or tier of a bed bottom or mattress when constructed in the usual and most approved forms in which spiral springs for that purpose are constructed, are exceedingly liable to be crippled down by lateral pressure, by which their action is not only injuriously affected at the time, but they are permanently injured and their

subsequent action rendered unsatisfactory. To obviate this difficulty we combine with these spiral springs 1, wire braces 2, so connected to the springs 1, or to the parts by which they are supported as to secure a firm connection at both top and bottom, the said braces 2 having a coil in the middle at 3, midway between the ends of said braces to give the necessary elasticity at that point to allow that portion of the brace to render to allow the spring to collapse as weight is thrown upon it without being prevented by the brace from doing so. This brace may be formed of the same piece of wire as that from which the spring is formed as shown in Fig. 5, or it may be made from a separate piece and attached either to the top or bottom of the spring, or to the slats or other contrivances to which the ends of the springs are attached, and by which they are supported.

In Fig. 5 the lower end of the brace 2 is represented as being knotted around the wire forming the top of the spring; it may be however turned at the bottom at a right angle and driven into the slat upon which the base of the spring is supported, the ledge where it is so driven being properly secured by tacking a piece of canvas over it to prevent the part driven into the board from drawing out, or any convenient means to secure it may be adopted. The mode of forming these springs 1, and braces 2, and combining them together may be modified in several different ways, all embodying the same feature of utility and novelty. The construction we have described we, however, deem the best and most available for the purpose. The arrangement described furnishes a resistance to lateral displacement in the direction in which the brace projects from the spring, or vice versa, the coils and the bar of which the spring braces are formed yield in a corresponding manner as the spring 1 is collapsed, so that the tendency is always to keep these springs in an upright position.

At the corners of the mattress or bed bottom, the braces 2 are set at an angle of 45° or thereabout, to the line of the front side so as to support it as well against thrust longitudinally with the bed or sofa as across it. The drawings illustrate this position of the spring.

The tops of the springs are stayed together with cords 4, in a manner which is well known to manufacturers of this kind of goods. The springs 1 are supported upon the slats 5, in the manner in which spiral springs for bed-bottoms are very commonly supported, and these slats are hinged to blocks 6, which are placed intermediately between the slats 5, and form connections between these slats. The hinges by which these blocks are connected to the slats we usually make of canvas, securing it by placing strips of leather 7 outside of the canvas 8 near the edges of the slats and blocks and nailing through both the leather and canvas into the wood, as shown in Fig. 3. Butt hinges or hinges of other construction may however be used if desired, but the expense involved in the use of butt hinges would probably be a fatal objection to their employment for this purpose. The intermediate blocks 6 are beveled as shown in the drawings, which allows whatever hinge may be used to unite them to fold inward so as to permit the bed bottom to be rolled up into the form represented in Fig. 4, the bevel of the blocks 6 being such as to restrict this inward folding to the proper extent to give the proper form and dimensions to the roll when the bed-bottom is rolled up, the beveled edges of the blocks striking against the slats, and preventing the further rendering of the hinge. This arrangement allows the bed bottom to be rolled up without the exercise of any particular care and still gives it a symmetrical appearance and sufficiently compact form.

The head of the bed bottom is raised so as to form a bolster by two rising blocks 9, 9, which are attached to the bed slats nearest the head to make the hinges secure from being damaged by weight being thrown upon the blocks which unite the lower slat to which the blocks 9, 9, are attached to the next one below. The blocks 9, 9, are beveled, as shown in Figs. 2 and 4, in such a manner as to underlie those blocks 6 which unite these two contiguous slats, and thus prevent the effect of the weight which may

be placed upon this block from falling upon the hinge.

Having thus fully described our invention, we wish it distinctly understood that we do not claim the bracing of the springs irrespectively of the means by which the bracing is accomplished. Such springs have often been secured by tying cords from one side of the bed to the other by which the lateral action of each spring in one or more directions was made dependent upon the lateral action of some of the other springs. By means of our improvement, however, the springs are braced to the slats, which enables them to resist a thrust against the side of the bed, which the mode of sustaining by cords will not do, and by this improvement each spring may be braced independently of the others. The peculiar construction of the brace gives it such an action as to afford the greatest lateral stability without at all interfering with the proper action of the springs.

The said invention which we claim as having been originally and first invented by us, is composed of the following improvements, namely:

1. The combination of the brace 2 constructed as described, with the spring 1, substantially as and for the purpose set forth.

2. The combination with the slats 5, upon which the springs are secured, of the beveled intermediate blocks 6 and the hinges by which the said blocks and slats are connected, substantially as and for the purpose set forth.

3. The combination of the head blocks or raising blocks 9, 9, with the slats to which they are attached, and with the intermediate blocks which connect the lower one of these slats to the next one below it when the head pieces 9, 9, are so beveled as to underlie this intermediate block, and thus relieve the hinge as described and specified.

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