(No Model.)

R. PREUSS.

WOVEN WIRE MATTRESS.

No. 401,301. Patented Apr. 9, 1889.

Fig. 1.

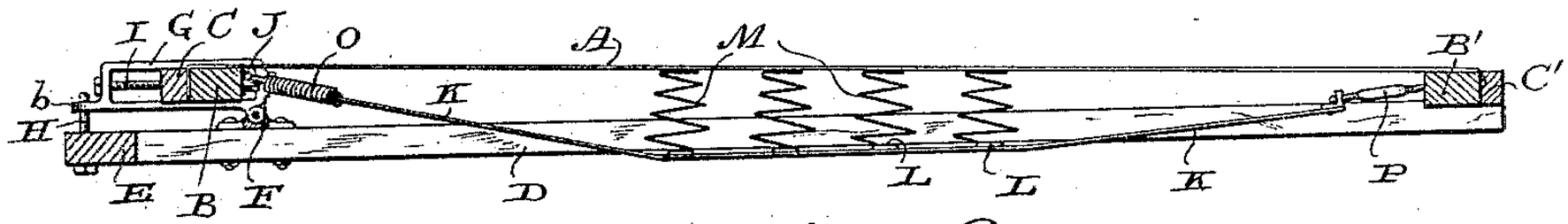


Fig. 2.

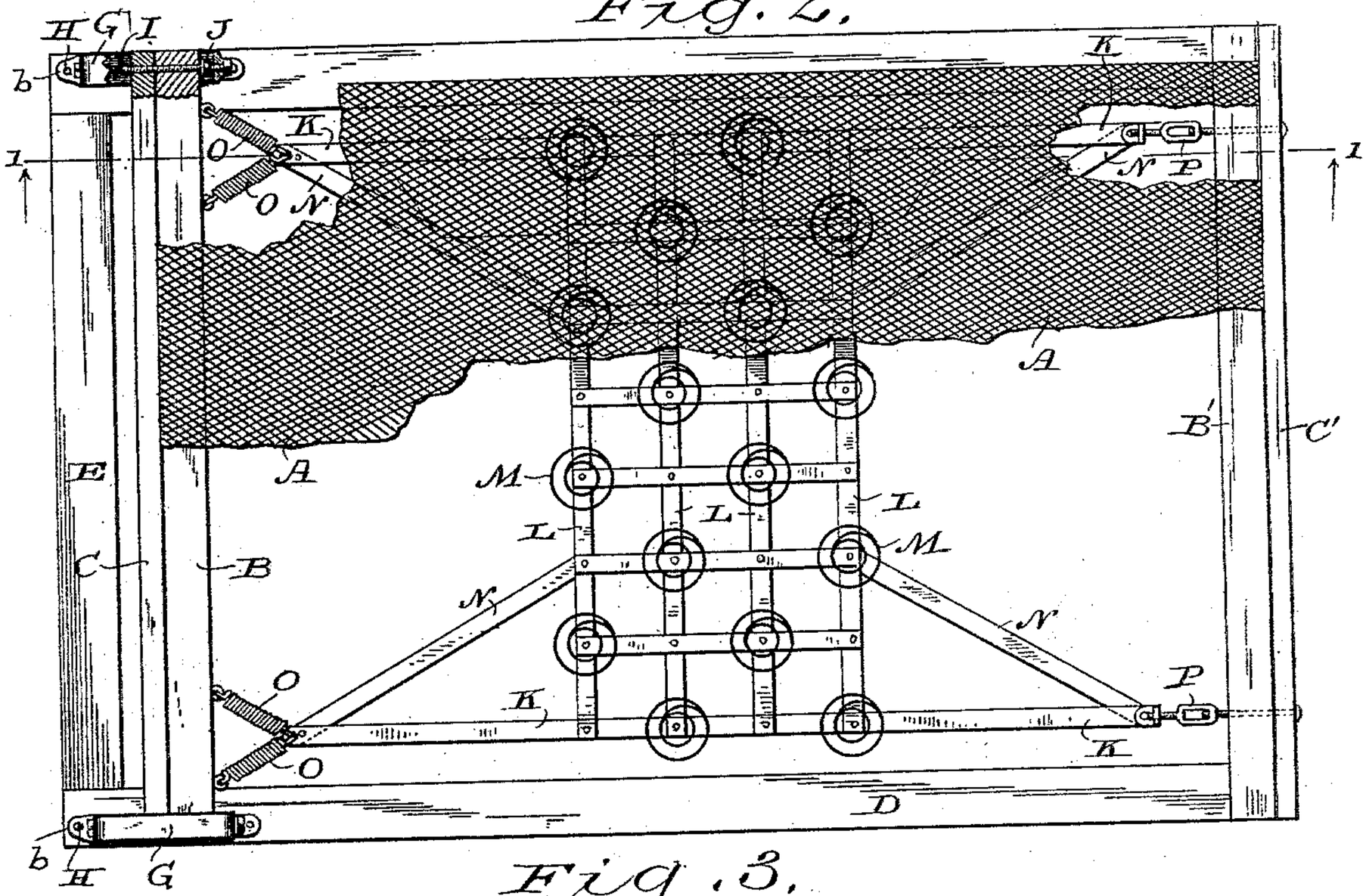


Fig. 3.

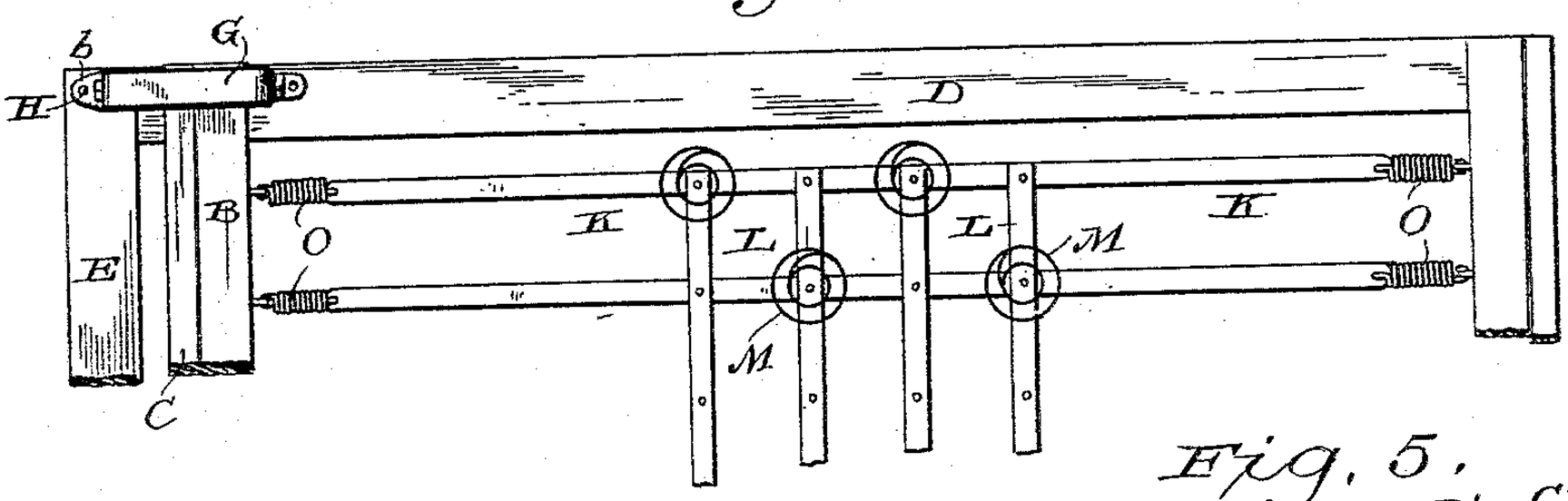


Fig. 5.

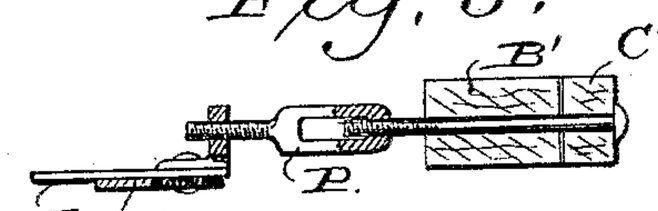
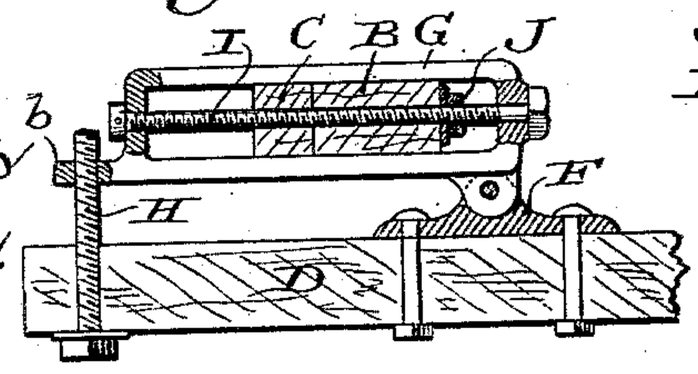


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

RUDOLPH PREUSS, OF MILWAUKEE, WISCONSIN, ASSIGNOR OF ONE-HALF TO FRED KUNKEL, OF SAME PLACE.

WOVEN-WIRE MATTRESS.

SPECIFICATION forming part of Letters Patent No. 401,301, dated April 9, 1889.

Application filed August 13, 1888. Serial No. 282,605. (No model.)

To all whom it may concern:

Be it known that I, RUDOLPH PREUSS, of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Woven-Wire Mattresses; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to certain new and useful improvements in woven-wire mattresses; and it consists in certain peculiarities of construction and combination of parts, to be hereinafter described with reference to the accompanying drawings, and subsequently claimed.

In the drawings, Figure 1 represents a longitudinal section of my improved mattress, the section being taken on line 1 1 of Fig. 2; Fig. 2, a top plan view of the mattress, partly broken away to illustrate a supporting-frame that forms part of the same; Fig. 3, a detail view illustrating another form of supporting-frame; Fig. 4, an enlarged detail side elevation, partly broken away, and illustrating the means for leveling the mattress in case of warp; and Fig. 5 a detail view of a swivel-connection preferably employed in my mattress.

Referring by letter to the drawings, A represents a woven-wire section provided with the cross-bars B B′ and caps C C′, usual in that class of devices to which my invention relates.

The cross-bar B′ is connected directly to the foot ends of side rails, D, and the head ends of these rails are united by a cross-brace, E. Bolted or otherwise rigidly connected to each side rail, D, near the head end thereof, is a casting, F, and to this casting is pivoted a rectangular link, G, the latter being provided with an extension, *b*, having a screw-threaded perforation therein to engage a set-screw, H, that is passed up through said side rail, as best illustrated in Fig. 4. The cross-bar B and cap C at the head of the woven-wire section A have their ends inserted in the links G, and passed through this cross-bar and cap are screws I, that have their bearings in the ends of said links. Arranged on each of the screws I, between the cross-bar B and the rear end of the adjacent link G, is a nut, J, and by turning said screws the nuts are adjusted thereon to regulate the tension of the woven-wire section A. In other words, when the screws I are turned in one direction the nuts J are run up to exert a pressure against the cross-bar B, and thereby force the latter and its cap C in an outward direction to take up any slack that may exist in the woven-wire section A; but, on the other hand, if said screws are turned in the opposite direction said nuts are run down and the strain upon said woven-wire section lessened.

In case the mattress becomes warped, as is frequently the case in that class of devices to which my invention relates, the warp can be readily compensated for by operating the screws H. Supposing a mattress to be warped on one side, the screw H on the opposite side would be turned to let the adjacent link G rise on its pivot and thereby slacken the strain, and should this operation fail to accomplish the desired result the other screw, H, would be turned to draw down on its link and thereby exert a strain in a direction opposite to the strain that already existed, the result being an equalization of strain in all directions and a truing up of said mattress.

It will be noticed that by the construction and arrangement of parts above described the woven-wire section A of the mattress is given a gradual rise from the foot to the head, and thus said mattress is better adapted for a person in a recumbent posture than one wherein the woven-wire section is on the same horizontal plane from end to end, as is ordinarily the case.

Secured to the cross-bars B B′ are the ends of longitudinal side strips, K, that are united by transverse strips L to form a frame, upon which I arrange a series of spiral springs, M, that impinge against the woven-wire section A and assist the latter in supporting any weight that comes thereon, whereby said woven-wire section is prevented from sagging and its elasticity is increased. The strips K L are preferably made from strap-iron, and in Fig. 2 I show diagonal strips N, that have their inner extremities secured to the ends of the longitudinal side strips and extend to a point midway of the latter and the centers of the outermost transverse strips, where their

inner extremities are secured. This form of supporting-frame is the one preferred; but in the form shown in Fig. 3 the diagonal strips N are omitted, and a series of longitudinal strips, K, arranged at regular intervals apart, are employed.

As shown in Fig. 2, one end of each longitudinal strip K is connected to the adjacent cross-bar B by means of two spiral springs, O, while the opposite end of said strip is connected to the cross-bar B′ by means of a swivel, P, the latter being adjusted to regulate the tension of said springs.

In Fig. 3 I show each end of the longitudinal strips connected to the cross-bars B B′ by a single spiral spring, and if found desirable the same construction can be employed in connection with the supporting-frame shown in Fig. 2, or one end of each strip may be rigidly attached to the adjacent cross-bar; but I prefer to employ the swivels P, because of the specified advantage derived from their use.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a woven-wire mattress, the woven-wire section and side rails, in combination with castings rigidly secured to the side rails, links pivoted at their inner ends to the castings for engagement with a cross-bar of said woven-wire section, and vertically-arranged set-screws passed through said side rails to engage the outer ends of the links, substantially as set forth.

2. In a woven-wire mattress, the woven-wire section and side rails, in combination with pivotally-adjustable links connected to the side rails to engage a cross-bar of said woven-wire section, screws passed through the cross-bar to have their bearings in the ends of the links, and nuts arranged on the screws between the inner side of said cross-bar and adjacent ends of said links, substantially as set forth.

3. In a woven-wire mattress, the woven-wire section and side rails, in combination with castings rigidly secured to the side rails, links pivoted at their inner ends to the castings for engagement with a cross-bar of said woven-wire section, set-screws passed through said side rails to engage the outer ends of the links, other screws passed through the cross-bar to have their bearings in both ends of said links, and nuts arranged on the latter screws to bear against the inner side of said cross-bar, substantially as set forth.

4. In a woven-wire mattress, the woven-wire section and side rails, in combination with castings rigidly secured to the side rails, links pivoted at their inner ends to the castings for engagement with a cross-bar of said woven-wire section, vertically-arranged set-screws passed through said side rails to engage the outer ends of the links, a frame having a yielding connection with said cross-bars, and spiral springs arranged on the frame to impinge against the woven-wire section, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

RUDOLPH PREUSS.

Witnesses:
N. E. OLIPHANT,
WILLIAM KLUG.