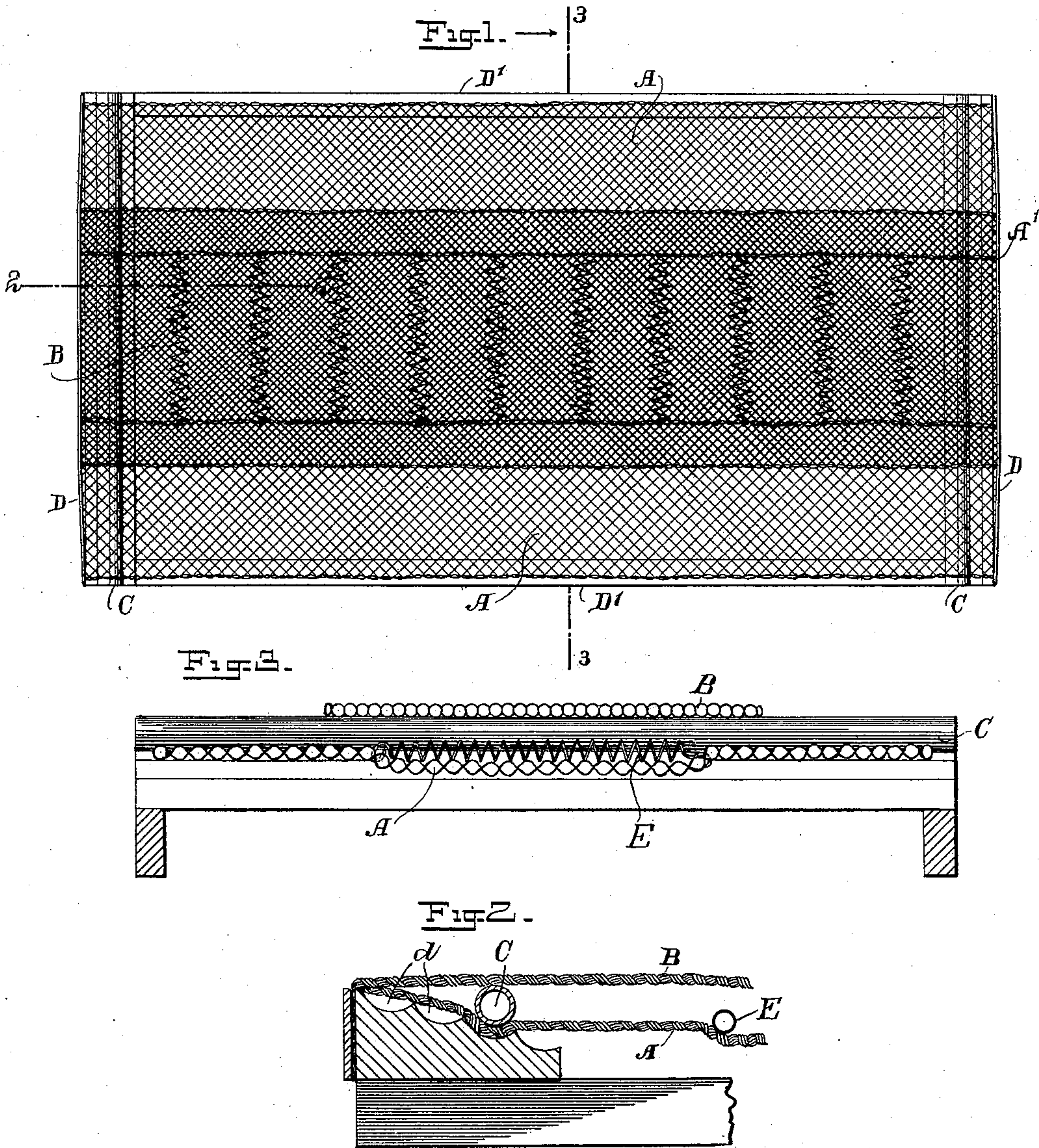


(No Model.)

J. B. RYAN.
BED BOTTOM.

No. 599,735.

Patented Mar. 1, 1898.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES B. RYAN, OF NEW YORK, N. Y.

BED-BOTTOM.

SPECIFICATION forming part of Letters Patent No. 599,735, dated March 1, 1898.

Application filed August 26, 1897. Serial No. 649,569. (No model.)

To all whom it may concern:

Be it known that I, JAMES B. RYAN, a citizen of the United States, residing at the city of New York, county and State of New York, have invented a new and useful Improvement in Bed-Bottoms, of which the following is a specification.

My invention relates to improvements in bed-bottoms, and particularly to such bed-bottoms as those in which the main pressure-plane is composed of woven-wire fabric; and its object is to provide a simple and efficacious means for reinforcing the said fabric and preventing undue sagging thereby. It is illustrated in the accompanying drawings, referred to herein, and in which—

Figure 1 is a plan view of a bed-bottom embodying my invention. Fig. 2 is a medial longitudinal section of the same, taken through the line 2 2 on Fig. 1. Fig. 3 is a transverse medial section of the same.

In the said drawings, D D represent the end rails, and D' D' the side rails, of the mattress-frame, the said end rails being elevated above the side rails and secured thereto by any suitable means of attachment. Between the end rails D D the woven-wire fabric and pressure-plane A is stretched, being secured to either rail, preferably by means of a strip or batten placed on the outside of the end rails and secured thereto, the fabric being compressed between the said batten and end rails.

At or near the center of the fabric A and longitudinally disposed is the reinforcing-strip B, being stretched between the said end rails and secured thereto in the same manner as the fabric A. It is preferably composed of more closely woven wire fabric than the main fabric A and stretched under a greater tension than the said fabric, being disposed above the same. It is of less diameter than the main fabric (preferably about one-half) and is provided with a selvage *d* on either edge.

The end rails D are provided with a series of ridges or corrugations *d* on their upper surfaces, which are beveled, being inclined downwardly toward the center of the bed, as shown in Fig. 2. The object of these corrugations is to provide a recess in which the rod or tube C may be lodged. This rod or tube C is of the same length as the end rails and is dis-

posed between the main fabric A and the reinforcing-strip B, the tension of the reinforcing-strip being greater than that of the main fabric, forcing the said rod downwardly into the ridges or corrugations *d*, which retain it in place and prevent it from slipping out toward the center of the bed. The object of this rod or tube is to separate the fabric and reinforcing-strip, to maintain the said strip in a position elevated above the said fabric, and to tighten the said strip when it becomes stretched, as will invariably be the case, to a greater or less extent when the bed is in use. The tightening of the strip is effected by moving the bar or tube outward toward the edge of the end rail, thus raising it on the incline thereof, elevating and increasing the tension of the strip. I have shown one of these rods C at either end of the bed, this being my preferred method of using them; but it is obvious that the said rod would be serviceable if only one were used.

In order to still further reinforce the fabric at its central position, I have inserted a series of transverse helical springs E, which are in length somewhat less than the diameter of the reinforcing-strip and are disposed between the said strip and the fabric A, having their ends engaging the strands A' of the fabric and being normally under tension. These springs will increase the tension of the fabric between their ends and the sides thereof, drawing it inwardly, so that the part of the fabric directly beneath them will be comparatively slack when no weight is superimposed upon the bed, and will first require to be stretched to a certain extent before the tension caused by the said weight can affect the fabric directly beneath them. It will be seen that by the use of this reinforcing device a reinforcement is afforded for the fabric at the center thereof possessing the same, or nearly the same, elasticity as the fabric itself, and which strip or reinforcement must first be stretched before the weight superimposed upon the bed can come in contact with the main fabric or pressure-plane, thus lessening the weight imposed upon the center of the main fabric. The weight falling secondarily upon the springs E will be distributed at the sides of the fabric before falling upon the center thereof, and in this manner the

center of the fabric is practically insured against sagging. By the use also of the rod or tube C and the beveled end rail the tension of the reinforcing-strip may be so increased that it will retain its original resistance through a long period of use, and this tension may further be increased by removing the tube C and replacing it by one of greater diameter. The reinforcing-strip B, also being somewhat elevated above the fabric A, will give the bed or cot upon which it is used a neat appearance when not in use, being higher at the center than at the sides.

What I claim is—

1. In a woven-wire mattress or bed-bottom the combination of the frame composed of side rails and end rails, the said end rails being beveled inwardly, and the fabric stretched upon the said frame between the end rails thereof, and a reinforcing-strip of fabric, said main fabric and strip being disposed one above the other, and a bar interposed transversely between said fabric and strip and resting upon one of the said beveled end rails.

2. In a woven-wire mattress or bed-bottom the combination of the frame composed of side rails and end rails the said end rails being beveled inwardly and having corrugations on their upper surfaces, and the fabric stretched upon the said frame between the end rails thereof and a reinforcing-strip disposed above the said fabric and a bar or tube inserted between the said fabric and strip.

3. In a woven-wire mattress or bed-bottom, the combination of the side rails and end rails thereof and woven-wire fabric stretched thereon and a central longitudinal reinforcing-strip of woven-wire fabric, a rod or tube inserted between the said strip and the main fabric of the bed, and a series of transverse spiral springs interposed between said reinforcing-strip and the main fabric having their ends engaging the meshes of the fabric.

JAMES B. RYAN.

Witnesses:

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