

A. J. PRUITT.
BED SPRING TIGHTENER.
APPLICATION FILED APR. 26, 1910.

984,391.

Patented Feb. 14, 1911.

2 SHEETS-SHEET 1.

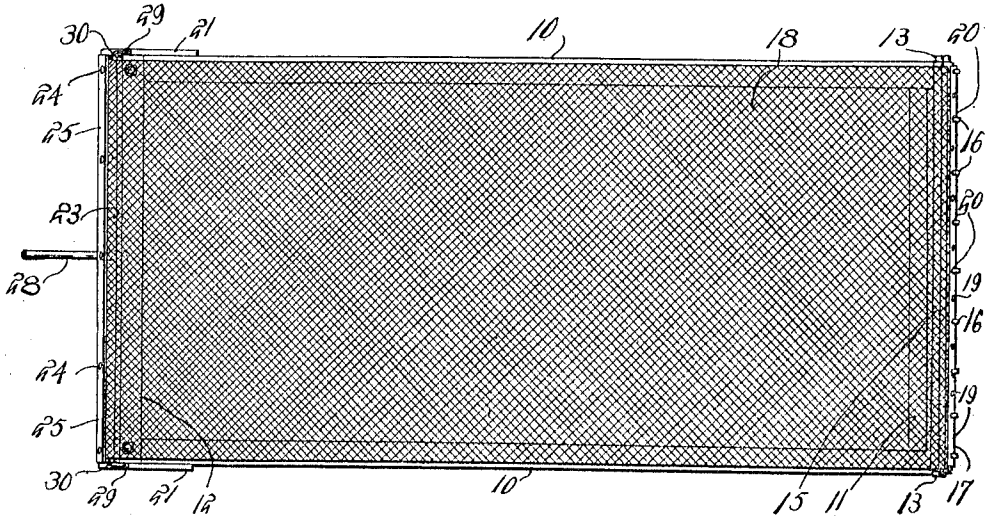


Fig. I.

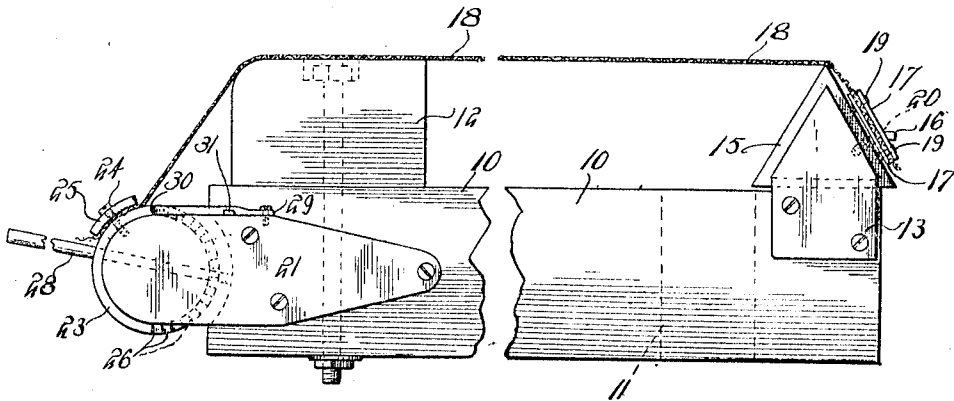


Fig. II.

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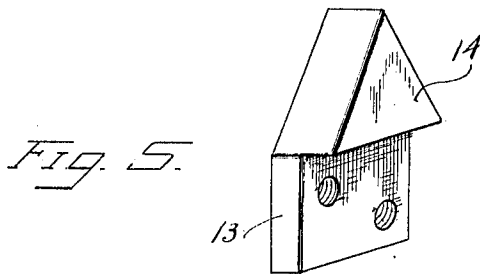
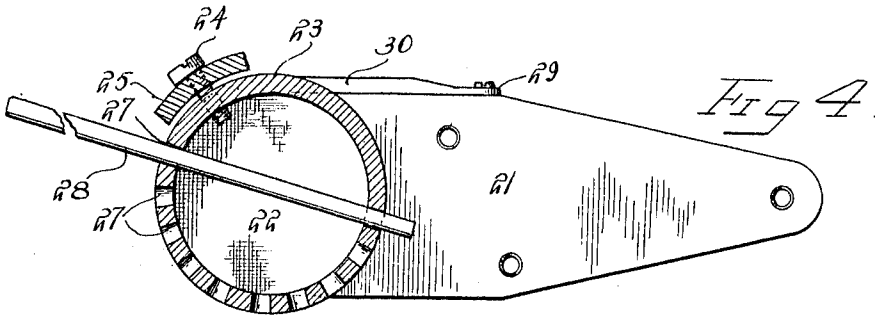
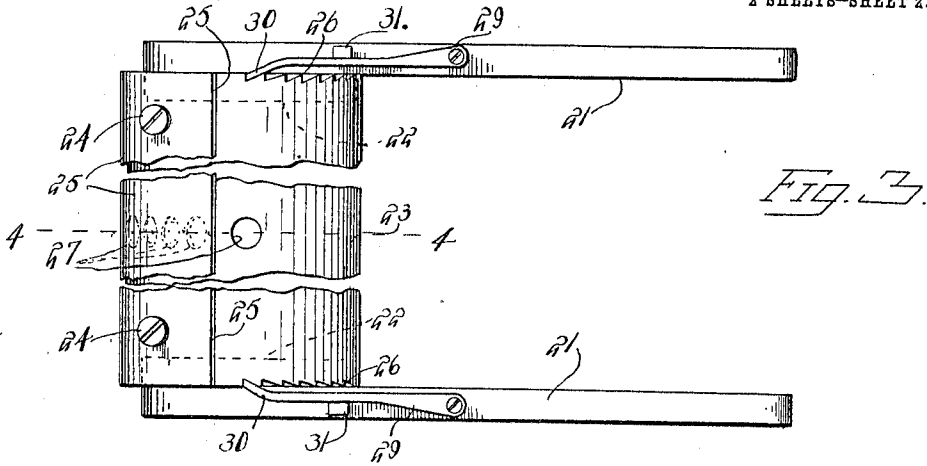
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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BED-SPRING TIGHTENER.

984,391.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ABRAHM J. PRUITT, a citizen of the United States, residing at Portland, in the county of Multnomah, State of Oregon, have invented certain new and useful Improvements in Bed-Spring Tighteners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to bed springs and has special reference to stretching or tightening devices for bed springs.

One object of the invention is to provide an improved manner of attaching the end of a bed spring or fabric to a frame so that said end may be readily removed.

Another object of the invention is to provide an improved tensioning means for such a bed spring.

With the above and other objects in view the invention consists in general of certain novel devices arranged to be attached to opposite ends of a bed frame, one of the devices constituting an improved form of what may be termed fixed attaching means while the other device constitutes an improved form of tensioning means.

The invention further consists in certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawings, and specifically set forth in the claims.

In the accompanying drawings, like characters of reference indicate like parts in the several views, and:—Figure 1 is a plan view of a bed frame with the devices applied thereto. Fig. 2 is an enlarged side elevation partly broken away of such a frame and the attachments. Fig. 3 is an enlarged plan view of the tensioning device, the tensioning roller and clamp being broken to permit the view being made to large scale. Fig. 4 is a section on the line 4—4 of Fig. 3. Fig. 5 is a detail of a support used in connection with the fixed securing means.

The frame here illustrated comprises side rails 10, a foot rail 11 and a head rail 12. In the present showing a wooden frame is disclosed but it is obvious that the ordinary rolled steel frame may be substituted for the wooden frame.

Secured to the side rails 10 adjacent the foot rail 11 are supports 13 each of which is provided on its inner face with a projection

14 having a periphery of polygonal form and preferably of the form of an equilateral triangle as here shown. Between the supports 13 extends a tube 15 the bore of which corresponds in shape and dimensions to the projections 14 so that this tube 15 may be held upon the supports 13 without rotation by engaging the projections 14 in the ends of said tube. Projecting from one side of the tube 15 is a series of pins 16. The clamp for this end of the bed spring comprises a pair of plates 17 adapted to receive a spring 18 between their opposed faces and these plates are held together by suitable rivets 19 so that they firmly clamp the end of the spring 18. The plates 17 are furthermore provided each with a series of openings 20 which are adapted to engage over the pins 16. From an inspection of Fig. 2 it will be noted that the tube 15 is there held with the side having the pins 16 adjacent the foot of the bed but it will be obvious that if it is found desirable the tube 15 may be rotated to bring this pin provided side in position either as the base of the triangular tube or as the side toward the head, the fabric at all times passing over the upper edge of the tube as shown in said figure.

Secured to the side rails 10 at the opposite end of the frame are a pair of plates 21 each of which is provided with a circular boss 22 and on these bosses is carried a cylindrical tube 23, the tube thus being revoluble on said bosses. Secured to this tube by means of bolts 24 is an arcuate clamping plate 25 and between this plate and the tube is received the head end of the spring 18. At each end of the tube is formed a series of ratchet teeth 26 which are formed in what may be termed the face of the end and each of these series extends only partially around said face, thus constituting an arcuate ratchet. It is to be noted that the arcuate ratchets thus formed are opposite each other. The tube 23 which constitutes a roller for the spring fabric is furthermore provided with a series of bar receiving openings 27 adapted to be entered by the end of a binding bar 28 so that the roller may be rotated by placing said bar in an appropriate opening and forcing the same around. Secured to the upper side of each of the plates 21 is a pawl 29 which is provided with a spring end 30 adapted to engage in the teeth 26 and in order to hold these pawls in engagement with their respective teeth

lugs 31 are formed on the plates 21 which bear against the backs of said pawls and force them inward into engagement with said teeth.

5 It will be seen from the foregoing that the ratchet teeth 26 are so positioned on the roller 23 that at no time is there any danger of these teeth engaging the spring fabric and cutting or tearing the same.

10 In using the device one end of the spring fabric is clamped between the clamp plates and these plates hooked over the pins 16. The other end of the spring fabric is then engaged between the roller and its clamp
15 plate and the roller rotated until the desired tension has been obtained in the spring fabric. In case sufficient tension cannot be obtained with the fabric grasped at each end the slack may be removed either by rotating the triangular tube after the pawls
20 have been released and the roller allowed to move back and setting the pins either below or in front of the position shown in Fig. 2, or the plate 25 may be loosened and the
25 spring drawn up and set as tight as possible beneath this plate before rotating the roller. When it is desired to ship the spring from one point to another it may be entirely detached from the triangular tube by lifting
30 the plates off the pins and completely rolling it up on the roller. In this manner the spring fabric can be protected from injury during transportation without making it necessary to box in the entire bed frame.

35 There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

It is obvious that minor changes may be made in the form and construction of this
40 invention without departing from the material principles thereof. It is not therefore desired to confine the invention to the exact form herein shown and described, but it is wished to include all such as properly
45 come within the scope of the appended claims.

Having thus described the invention, what is claimed as new, is:—

1. In a device of the kind described, a
50 pair of supports adapted to be secured to a bed frame, lateral projections formed on the inner faces of said supports and having polygonal contours, a polygonal tube carried by said projections and fitted thereon

to prevent rotation of the tube on the pro- 55
jections, pins projecting from said tube, and a clamp adapted to hold the end of a bed spring structure and provided with a series of openings to receive said pins and detach- 60
ably hold said clamp on said tube.

2. In a device of the kind described, a pair of supports adapted to be secured to a bed frame, lateral projections formed on the inner faces of said supports and having polygonal contours, a polygonal tube carried 65
by said projections and fitted thereon to prevent rotation of the tube on the projections, pins projecting from said tube, and a clamp adapted to hold the end of a bed spring structure and provided with a series of 70
openings to receive said pins and detachably hold said clamp on said tube; in combination with a bed frame at one end of which said supports are secured, means at the opposite end of said frame to tension a 75
spring, and a bed spring having one end held by said clamp and the other end secured to said tensioning means.

3. In a device of the kind described, a pair of supports adapted to be secured to a 80
bed frame, lateral projections formed on the inner faces of said supports, said projections having cross sections forming equilateral triangles with their bases parallel to the frame when secured thereto, a tube hav- 85
ing an interior cross section of equilateral triangular form corresponding in size to the projections and held thereon between said supports, pins projecting from said tube, a clamp adapted to hold the end of a bed 90
spring structure and provided with a series of openings to receive said pins and detachably hold said clamp to said member; in combination with a bed frame at one end of which said supports are secured, a roller at 95
the opposite end of said frame, means to rotate said roller, an arcuate ratchet formed on said roller, a pawl coacting with said ratchet, and a bed spring having one end held by said clamp and the other end at- 100
tached to said roller.

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

ABRAHM J. PRUITT.

Witnesses:

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