C. A. CHALKER.

BED SPRING.

APPLICATION FILED JUNE 5, 1914.

1,135,877.

Patented Apr. 13, 1915.

2 SHEETS—SHEET 1.

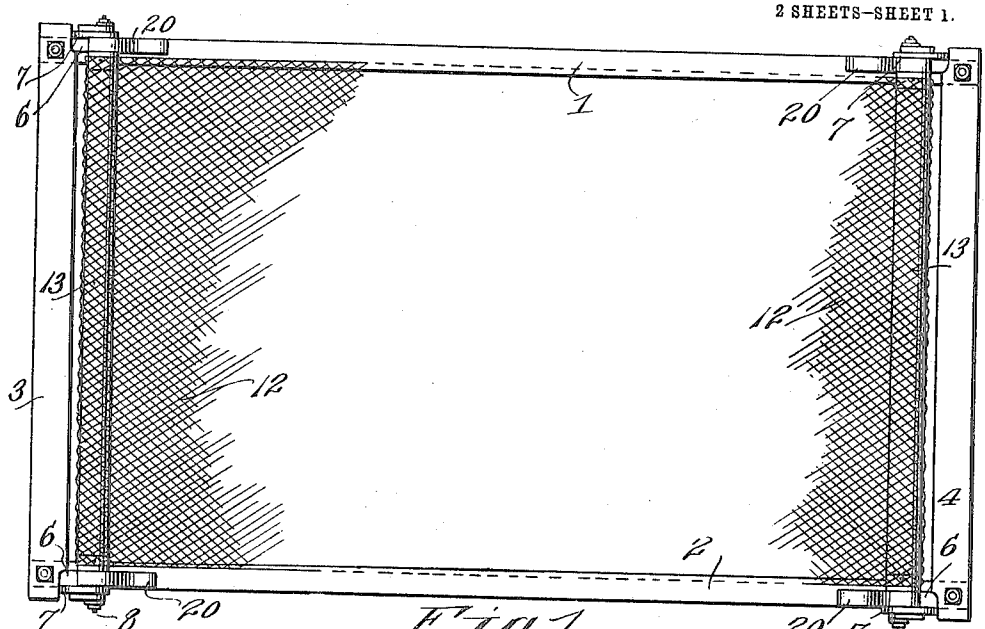


Fig. 1.

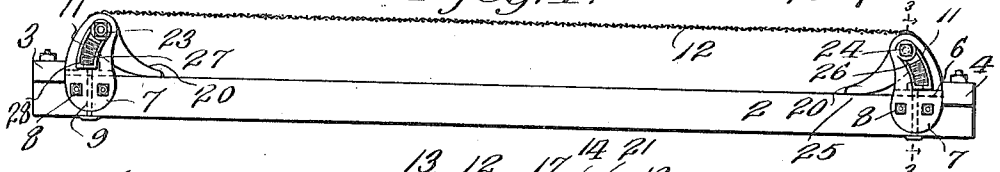


Fig. 2.

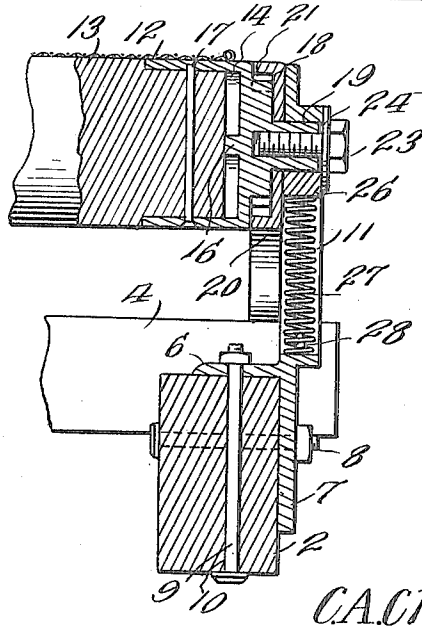


Fig. 3.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 5.

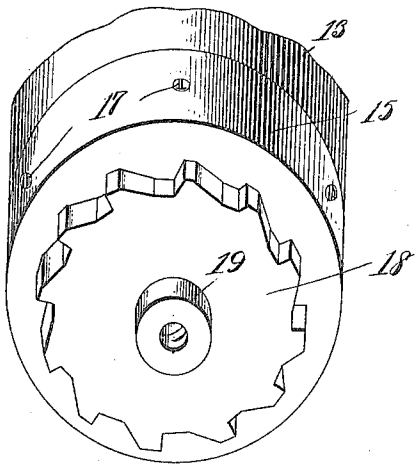


Fig. 4.

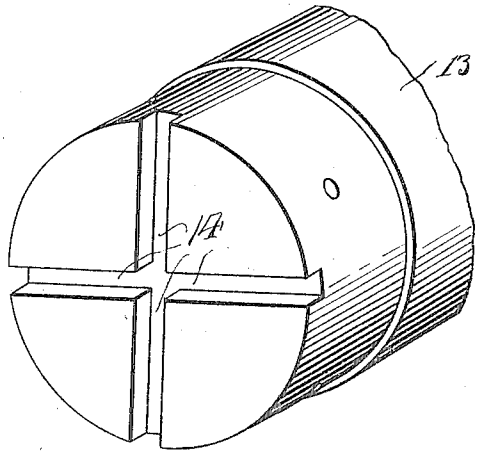
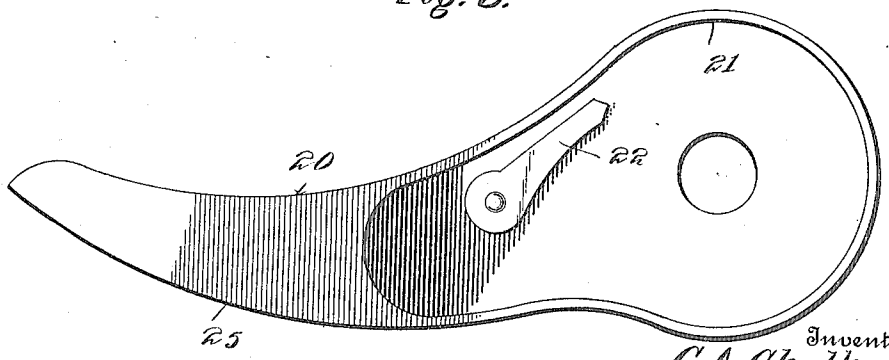


Fig. 6.



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UNITED STATES PATENT OFFICE.

CHARLES A. CHALKER, OF TRAVERSE CITY, MICHIGAN.

BED-SPRING.

1,135,877. Specification of Letters Patent. Patented Apr. 13, 1915.

Application filed June 5, 1914. Serial No. 843,251.

To all whom it may concern:

Be it known that I, CHARLES A. CHALKER, a citizen of the United States, residing at Traverse City, in the county of Grand Traverse and State of Michigan, have invented new and useful Improvements in Bed-Springs, of which the following is a specification.

This invention relates to bed springs and more particularly to means for automatically or manually tightening said springs.

One of the principal objects of the invention is the provision of a bed spring which will automatically tighten itself upon application of weight thereto and which will also be manually tightened when desired.

Further objects of the invention will appear as the following description is read in connection with the accompanying drawing, which forms a part of this application, and in which:—

Figure 1 is a top plan view. Fig. 2 is a side elevation. Fig. 3 is a vertical sectional view on the line 3—3 of Fig. 2. Fig. 4 is a detail perspective view of one end of one of the spring rollers. Fig. 5 is a perspective view of a ratchet cap. Fig. 6 is a side elevation of one of the levers.

Referring more particularly to the drawing, the frame of the bed spring comprises side rails 1 and 2 and end rails 3 and 4 which are bolted thereto, as is customary, a wooden frame being here shown. It is to be understood, however, that metallic frames may be employed whenever desired.

Mounted upon the side rails 1 and 2 adjacent each of the cross rails are standards having shoulders 6 to rest upon the rail and depending flanges 7 secured to the rail by bolts 8 and by the hook 9 which enters an aperture 10 in the rail. The upper end of each standard is provided with an arcuate slot 11 which is inclined from its bottom to its top away from the cross bars 3 and 4.

The spring fabric indicated at 12 may be constructed in any suitable manner and has its opposite end edges attached to rollers 13. These rollers are grooved upon their outer ends, as shown at 14, and covering the grooved ends are ratchet caps having ribs 16 to enter the grooves, the caps being secured to the rollers by screws, bolts or other suitable devices indicated at 17. The outer end of the cap is provided with a ratchet wheel 18 from which projects a concentric boss 19 upon which the actuating lever 20 is journaled. This actuating lever is provided with a flange 21 which abuts against the cap 15 and within the confines of the flanges 21 is pivoted a pawl 22 arranged to engage the teeth of the ratchet wheel 18.

The boss 19 projects through the lever and is slidably and rotatably mounted in the slot 11, being held against displacement by a bolt and washer 23 and 24, the latter overlapping the side slot, as shown. The lower side of the lever is provided with a rounded surface 25 to bear upon the rails 1 and 2 and so that it will slide over said rails with little friction. The boss 19 rests upon a bearing 26 which is slidably mounted in the slot 11 and is supported upon a spiral spring 27 whose lower end is held against disengagement by a lug 28.

When weight is applied to the spring the same will sag slightly and cause a depression of the ends of the rollers 13 in the standards so that as they are depressed against the tension of the springs 27 the outer ends of the levers will move upwardly relatively and turn the rollers in a direction to wind the spring thereon. When the spring becomes considerably sagged one of the levers at one side of the bed may be raised by a lever at the opposite side of the bed and remain in stationary position, thus the pawl will drop into the next lowest tooth. The lever raised may then be dropped which will cause its pawl to drop in the next lowest tooth. This operation may be carried out as many number of times as may be found desirable.

What is claimed is:—

1. A bed spring comprising a frame, standards carried thereby, a spring fabric, means connected to the spring fabric and slidably mounted in the standards, and means for automatically actuating said last-named means to tighten the spring when weight is applied to the spring fabric.

2. In a bed spring, a frame, standards carried thereby and having inclined slots, a spring fabric, means connected to opposite ends of the spring fabric and slidably mounted in the slots, and means for automatically operating said last-named means to tighten the spring when weight is applied to the spring fabric.

3. In a bed spring, a frame, slotted standards carried by the frame, rollers slidably and rotatably mounted in the standards, a spring fabric connected to the rollers, and

means for automatically turning the rollers to tighten the spring when weight is applied to the fabric.

4. In a bed spring, a frame, standards carried by the frame and having inwardly inclined slots, rollers rotatably and slidably mounted in the slots, a spring fabric connected to the rollers and adapted to be wound thereon, said spring fabric holding the rollers in the upper end of the slots, said slots adapted to stretch the fabric when the rollers are depressed therein by weight upon the fabric, and means for winding the fabric on the rollers when weight is applied to the fabric.

5. In a bed spring, a frame, slotted standards mounted upon the frame, rollers slidably and rotatably mounted in the standards, spring fabric connected to the rollers, and levers operatively connected to the rollers and engaged with the frame for turning the rollers in the standards and winding fabric on said rollers when weight is applied to the fabric.

6. In a bed spring, a frame, slotted standards connected to the frame, rollers journaled in the standards and slidably mounted therein, springs for supporting the rollers, ratchet wheels carried at opposite ends of the rollers, levers journaled on the rollers and having a pawl to engage the ratchet wheels, said levers engaged with the frame and a spring fabric connected to the rollers and adapted to be wound thereon.

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

CHARLES A. CHALKER.

Witnesses:

CHAS. B. DYE,

JAMES H. MONROE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."