No. 885,549. PATENTED APR. 21, 1908.

W. VAN DUZEE.

DEVICE FOR TIGHTENING THE FABRIC OF BED SPRINGS.

APPLICATION FILED OCT. 24, 1907.

Fig. 1.

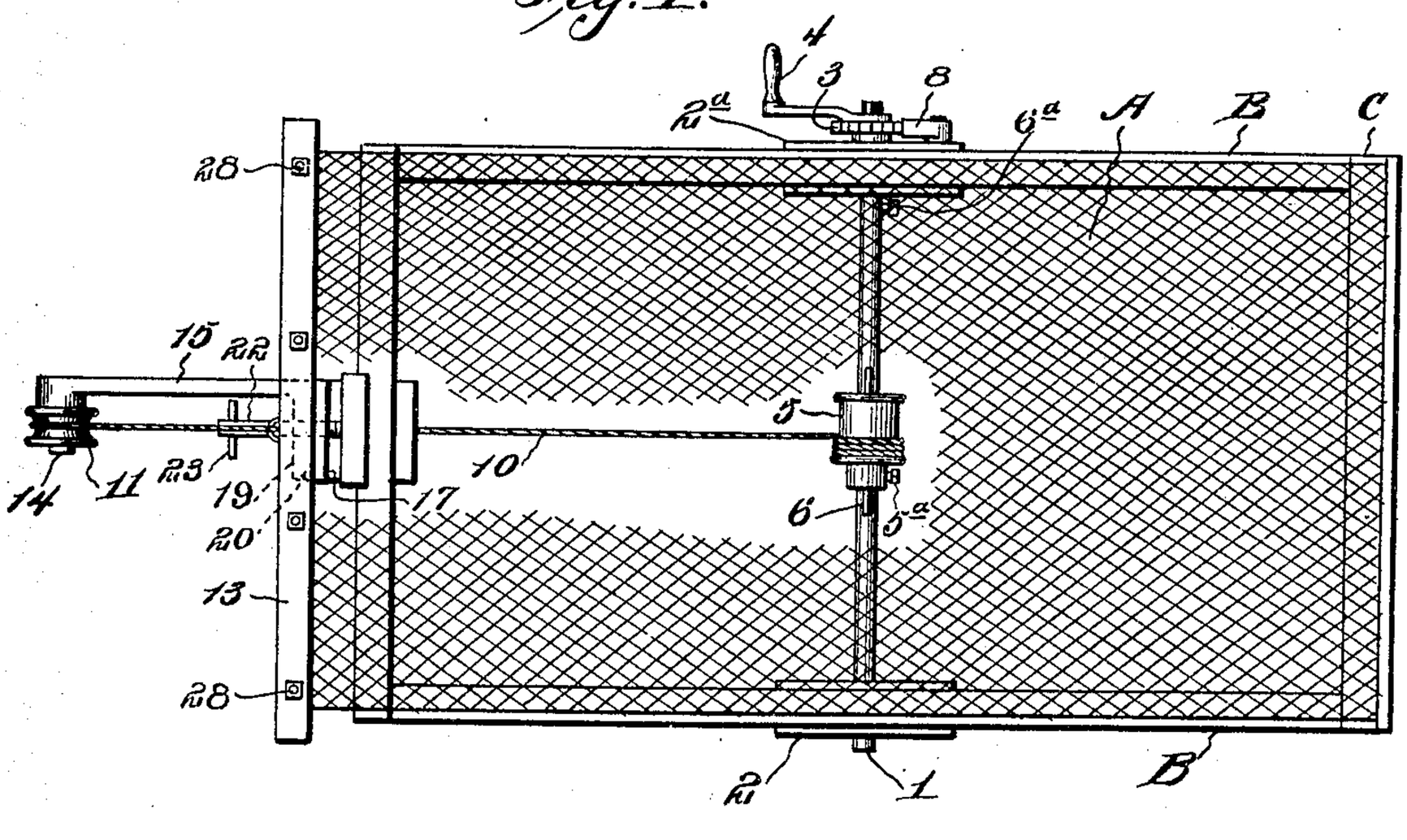


Fig. 2.

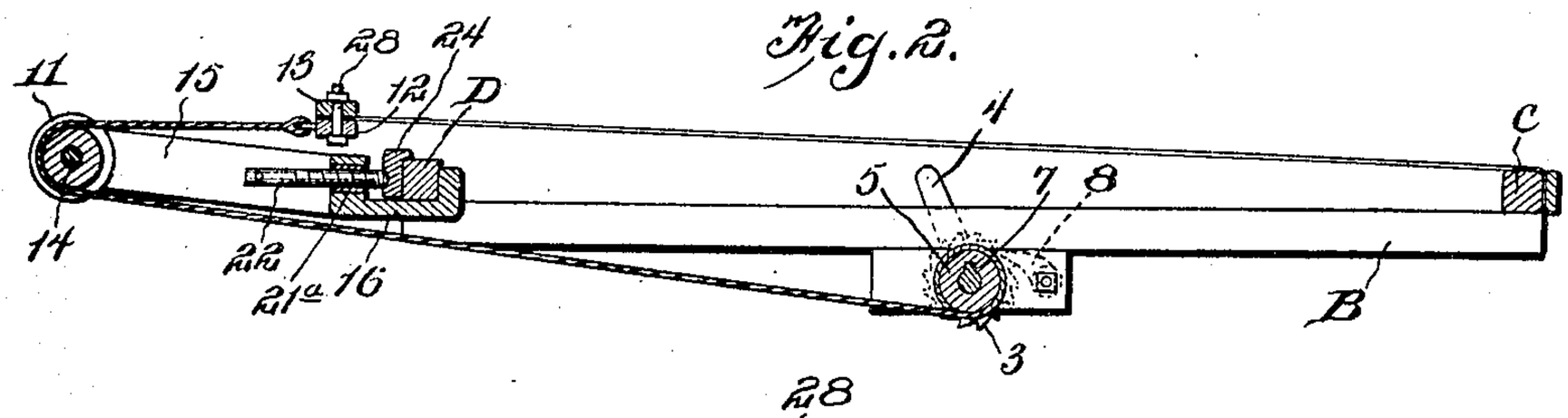
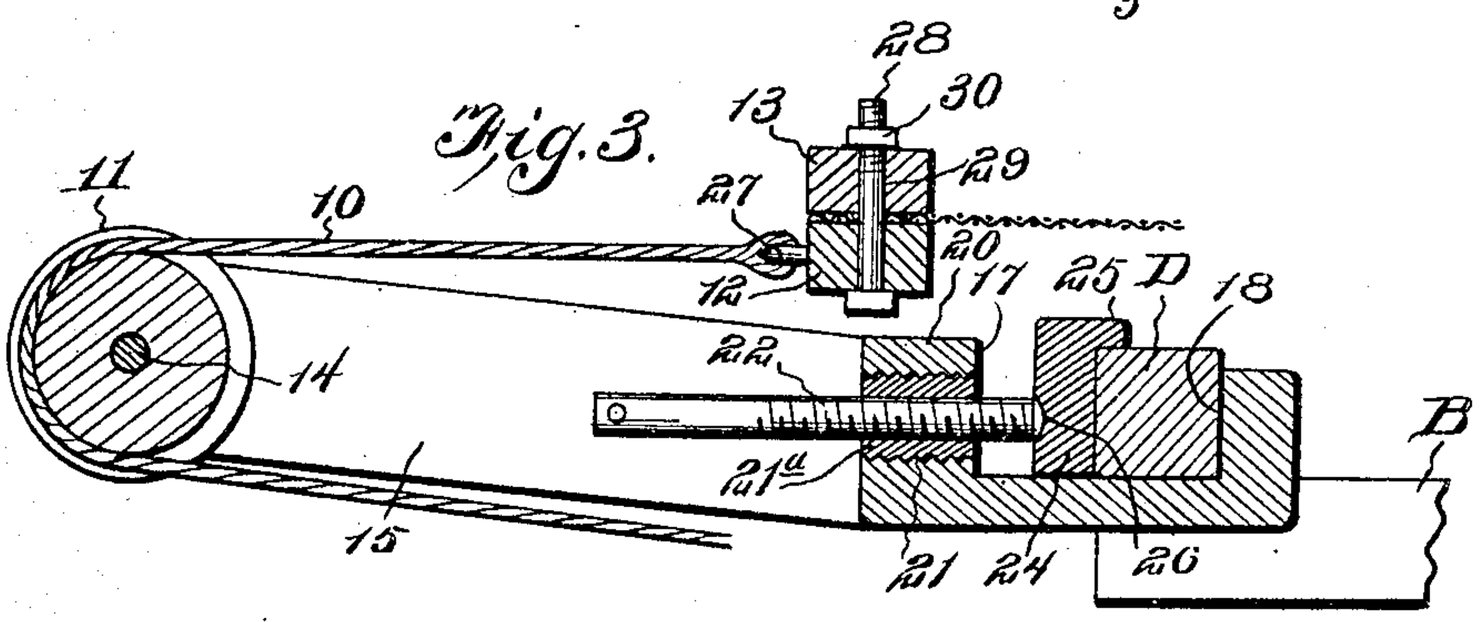


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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DEVICE FOR TIGHTENING THE FABRIC OF BED-SPRINGS.

No. 885,549. Specification of Letters Patent. Patented April 21, 1908.

Application filed October 24, 1907. Serial No. 399,009.

To all whom it may concern:

Be it known that I, WILLARD VAN DUZEE, a citizen of the United States, residing at Jackson, in the county of Jackson and State of Minnesota, have invented certain new and useful Improvements in Devices for Tightening the Fabric of Bed-Springs; and I do 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 devices for repairing bed springs, and has for its object to provide a device for tightening and adjusting the spring fabrics of bed springs after the spring has been used so long that the fabric has become stretched.

An embodiment of my invention is described in the annexed specification, but the construction therein shown is merely illustrative, as the details may be greatly changed without departing from the spirit and scope of the invention.

In the drawings, Figure 1 is a plan view of my device applied to a bed spring; Fig. 2 is a longitudinal vertical sectional view; and Fig. 3 is an enlarged view partly in section and partly in elevation of the pulley support.

I illustrate my device in connection with a bed spring, A, consisting of side pieces, B—B, and end pieces, C and D. The wire fabric is held in place at the end, C, of the spring frame as shown, the other end of the fabric being detached from the bed spring frame and having my attachments applied as will be explained.

My attachment may be described as follows:

A shaft, 1, is adapted to rotate in bearing blocks, 2—2ª, temporarily nailed to the bottom of the side pieces, B—B of the bed frame. These blocks may be clamped in place, but it has been found more convenient to nail them. The shaft 1 is provided with a squared end on which is mounted and held by a set-screw, a ratchet wheel, 3, and a crank handle, 4, said crank and wheel being integral. A rotating drum 5 is slidably mounted on the shaft 1 so as to rotate with said shaft, by means of a key, 6, in a keyway, 7, in such a manner as to permit longitudinal movement between the drum and the shaft. A set-screw, 5ª, holds the drum against longitudinal movement. A set-screw, 6ª, together with the ratchet wheel 3 prevent longitudinal movement with reference to the block, 2ª. As will be explained, the block 2 is free to move longitudinally with respect to the shaft 1. A pawl 8 is pivoted to the block 2ª for engagement with the teeth of the ratchet wheel 3 to prevent retrograde movement. A flexible cord or rope 10 is attached to the drum 5 to be wound about the same and is passed over the pulley 11 to the clamping strips, 12, 13. The pulley 11 is mounted for rotation on the stub shaft 14, fixed in the end of the shank 15, and at right-angles thereto. The shank 15 is provided with an enlarged portion, 16, which has two opposed shoulders, 17, 18, and a shoulder 19. The shoulders, 17, 19, together form the lug, 20, which lug has an opening 21, which may be provided with an internally screw-threaded thimble, 21ª for the reception of the screw, 22. The screw 22 is provided with a crossed handle, 23, for manipulating the same. Sliding in the enlarged portion 16 between the shoulders 17—18 is a block, 24, with a lip, 25, at its upper side extending toward the shoulder, 18. The block 24 is also provided with a cylindrical hole, 26, to receive the end of the screw, 22, by which screw the block 24 is adjusted. The block 24 and the shoulder 18 together form a vise adapted to grip the end pieces, D, of the bed spring frame.

The clamping strip 12 may be provided with a staple, 27, bolted thereto, to which is fastened the cord, 10. The strip 12 is also provided with bolts, 28, tightly driven into perforations therein. These bolts pass through alined perforations 29 in the strip, 13. Nuts, 30, on said bolts clamp the strips together.

In operation the block 2ª is fastened to the underside of one of the side pieces B. The block 2 is then moved along the shaft 1 to its proper place and is fastened to the other side piece, B. The drum 5 is adjusted to be substantially midway between the pieces B—B. The shank 15 being clamped in place and the strips 12 and 13 having been clamped in the free end of the fabric, E, which has been unfastened from the frame piece D, the cord 10 is passed over the pulley 11 and is securely fastened to the staple 27. The crank 4 is

then rotated until the spring fabric is tightened to the desired degree, the pawl 8 preventing any retrograde movement until the free end of the fabric can be securely fastened to the end piece, D.

The various parts may be made of iron or any preferred metal or material.

Having described my invention, what I claim as new and desire to secure by Letters-Patent, is:

1. In a device of the class described, a shaft rotatably mounted in bearings, a drum mounted on said shaft and fixed to rotate therewith, means to rotate said shaft, a device adapted to embrace an end piece of a bed spring frame, said vise having a shank carrying a pulley and consisting of opposed shoulders and means to adjust said shoulders, clamping strips adapted to receive there-between the free ends of the bed spring, adjustable means to clamp said strips together and flexible means connecting said drum and said clamping strips in passing over said pulley.

2. In a device of the class described, means for clamping the free end of the wire fabric of the bed spring, a vise having adjustable jaws adapted to be secured to an end piece of the bed spring frame, a shank extended outwardly from said vise and adapted to project beyond the end of the bed spring frame, a pulley on said shank, a drum adapted to be rotatably mounted on said bed spring frame and flexible means connecting said pulley with the means for clamping the free end of the wire fabric, said flexible means passing over said pulley, and means for rotating said drum.

3. In a device of the class described, bearing blocks adapted to be fastened to the side piece of a bed spring frame, a shaft rotatably mounted in said bearing blocks and held against longitudinal movement with one of said blocks and longitudinally adjustable with respect to the other, a drum mounted intermediate the ends of said shaft adjustable for longitudinal movement and fixed to rotate with said shaft, an integral crank and ratchet wheel fixed at one end of said shaft, a pawl on one of said bearing blocks for operation with the teeth of said ratchet wheel, a vise adapted to embrace an end piece of said bed spring frame, said vise having a shank carrying a pulley and consisting of oppositely opposed shoulders with a block slidable therebetween, a screw-threaded rod adjustable in a perforation in one of said shoulders and adapted to bear against said slidable block, clamping strips adapted to receive therebetween the free ends of the bed spring fabric to be adjusted, bolts and nuts to clamp the said strips together, and a flexible means connecting the said drum and said clamping strips and passing over said pulley.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLARD VAN DUZEE.

Witnesses:
T. J. KNOX,
B. J. SWANN.