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G. S. WILLETT.
BED SPRING TIGHTENER.

APPLICATION FILED SEPT. 8, 1904. RENEWED JULY 27, 1905.

Fig. 1.

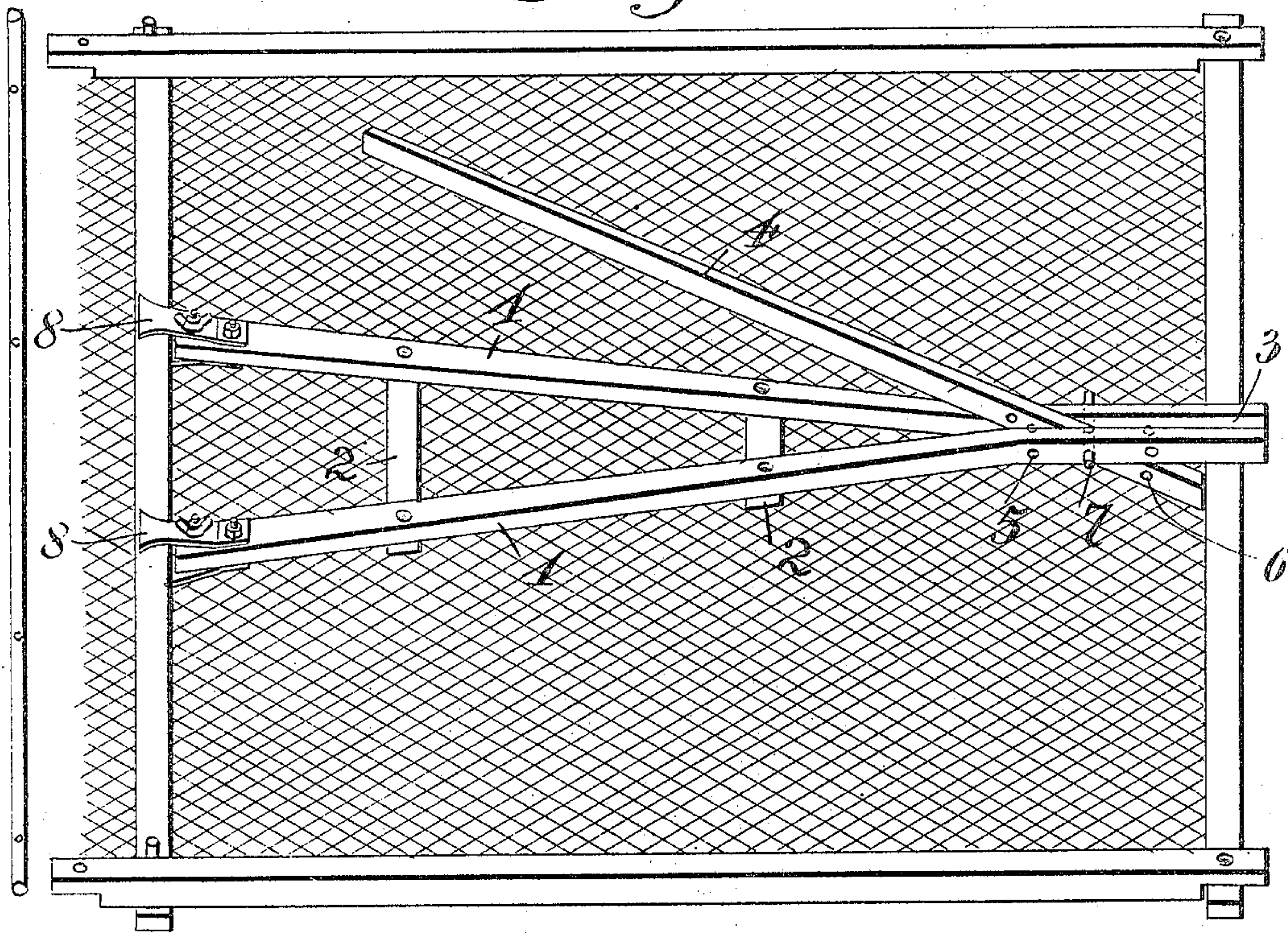


Fig. 2.

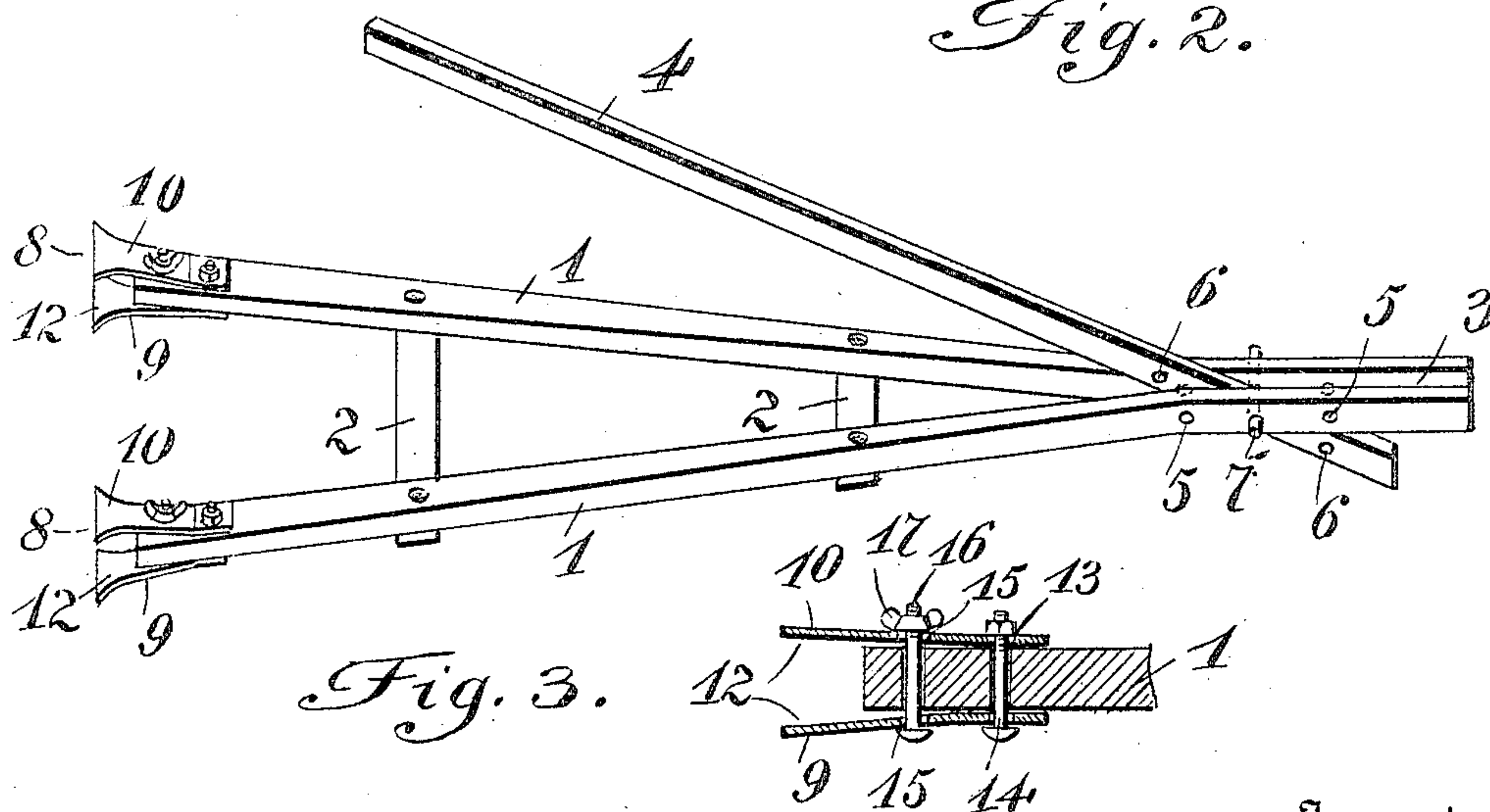
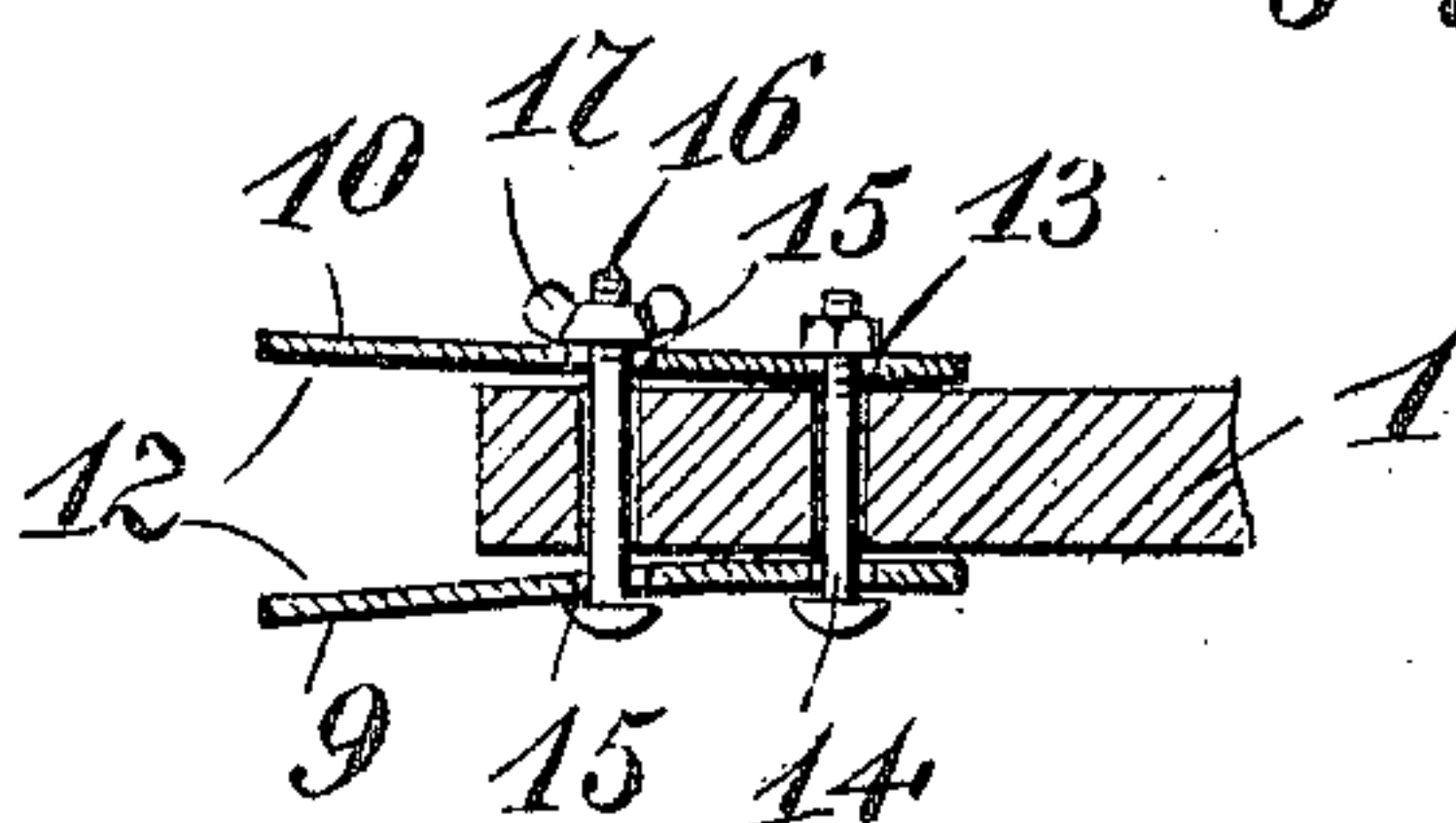


Fig. 3.



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BED-SPRING TIGHTENER.

No. 803,144.

Specification of Letters Patent.

Patented Oct. 31, 1905.

Application filed September 8, 1904. Renewed July 27, 1905. Serial No. 271,562.

To all whom it may concern:

Be it known that I, GORDON S. WILLETT, a citizen of the United States, residing at Sioux Falls, in the county of Minnehaha and State of South Dakota, have invented certain new and useful Improvements in Bed-Spring Tighteners; 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 improvements in stretching and tightening devices for bed-springs.

The object of the invention is to provide a device of this character whereby woven-wire bed-springs may be tightened after the same have become loose or slack from use.

A further object is to provide a device of this character which will be simple, strong, and durable in construction, efficient in operation, inexpensive, and well adapted to the purpose for which it is designed.

With these and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter more fully described, and particularly pointed out in the appended claim.

In the accompanying drawings, Figure 1 is a perspective view of a woven-wire bed-spring, showing the application and the manner of using the stretcher or tightening device. Fig. 2 is a perspective view of the tightening device removed from the spring, and Fig. 3 is a detail sectional view through one end of one of the stretcher-bars and a clamping device carried thereby.

Referring more particularly to the drawings, 1 denotes a pair of stretcher-bars, which are obliquely arranged one with respect to the other and are held in position by means of cross-bars or cleats 2. The cleats 2 are secured to the lower side of the bars, as shown. The bars 1 are so formed that the adjacent inner faces 3 of the same at their approaching ends will lie in parallel relation with each other, thereby forming between said faces a straight passage. In said passage is adapted to work the lower end of a stretching-lever 4. In said ends of the bars 1 are formed a series of alined bolt-holes 5, and in the lower end of the lever 4 is formed a series of bolt-holes 6, through one of which and a pair of the alined holes 5 is adapted to be passed a pivot-bolt 7, whereby the lower end of said lever may be

adjustably mounted between said parallel ends of the bars 1. By forming bolt-holes in both the lever 4 and the ends of the bars 1 said lever may be adjusted both longitudinally and vertically, thereby permitting the same to be engaged with the different sizes and constructions of spring-frames. On the opposite divergent ends of the bars 1 are arranged clamping devices 8, whereby said ends may be removably connected with the end rail of the bed-springs, thereby preventing the same from slipping on said rail while the springs are being stretched.

The clamping devices 8 may be of any suitable construction, but are here shown as being formed of upper and lower clamping-plates 9 and 10, the outer ends of which are flared outwardly to form gripping-surfaces 12. In the inner ends of the plates 9 and 10 are formed elongated apertures 13, through which and the bars 1 are adapted to be passed attaching-bolts 14, whereby said clamping-plates are loosely held in position on said bars. In the plates 9 and 10 are also formed bolt-holes 15, through which are adapted to be passed thumb-screws 16, the lower ends of which are adapted to be engaged with nuts 17 on the lower side of the plate 10, whereby when said thumb-screws are screwed inwardly or outwardly the clamping-plates 9 and 10 will be brought into engagement with or released from the upper and lower sides of the bed-spring rail.

When it is desired to stretch a spring, the same is preferably laid flat upon the floor with the wire or spring side lowermost. The cleat and end of the spring is now disconnected from one end rail of the frame, and said end rail is then disconnected from the side rails of the frame and is moved inwardly to a certain distance, said distance being determined by the amount of slack or looseness found in the springs. The position of the end rail having been determined, the ends of the springs are again connected to the same and the cleat replaced thereon. The projecting end of the spring is then cut off. The stretching device is now applied to the frame of the spring by engaging the clamping devices 8 on the ends of the bars 1 with the said end rail, after which the lower end of the lever 4 is engaged with the end rail at the opposite end of the spring-frame, said lever having been previously adjusted to the proper position for stretching said springs. The upper end of the lever is now forced downwardly, thereby

causing the lower end of the same to project longitudinally, which will cause the bars 1 to force the loose end rail in the opposite direction, thereby stretching said springs until
5 said end rail has reached its original position, when the same will again be bolted to the ends of the side rails, thereby holding the springs in a stretched or tightened condition.

From the foregoing description, taken in
10 connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion,
15 and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

A stretching and tightening device for bed-

springs, comprising a frame having side bars which converge toward one end and are provided with adjusting-openings, cross-bars connecting said converging bars and clamping
25 members on opposite sides of and projecting from the diverging ends of said bars, means to adjust said clamping devices and secure them to the end rail of a bed-spring, and a
30 lever-bar provided near one end with adjusting-openings having said end placed between the converging ends of the side bars of the frame and a fulcrum-pin in registering adjusting-openings of said frame and said lever-
35 bar, substantially as described.

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

GORDON S. WILLETT.

Witnesses:

JOE KIRBY,

M. E. ABBOTT.