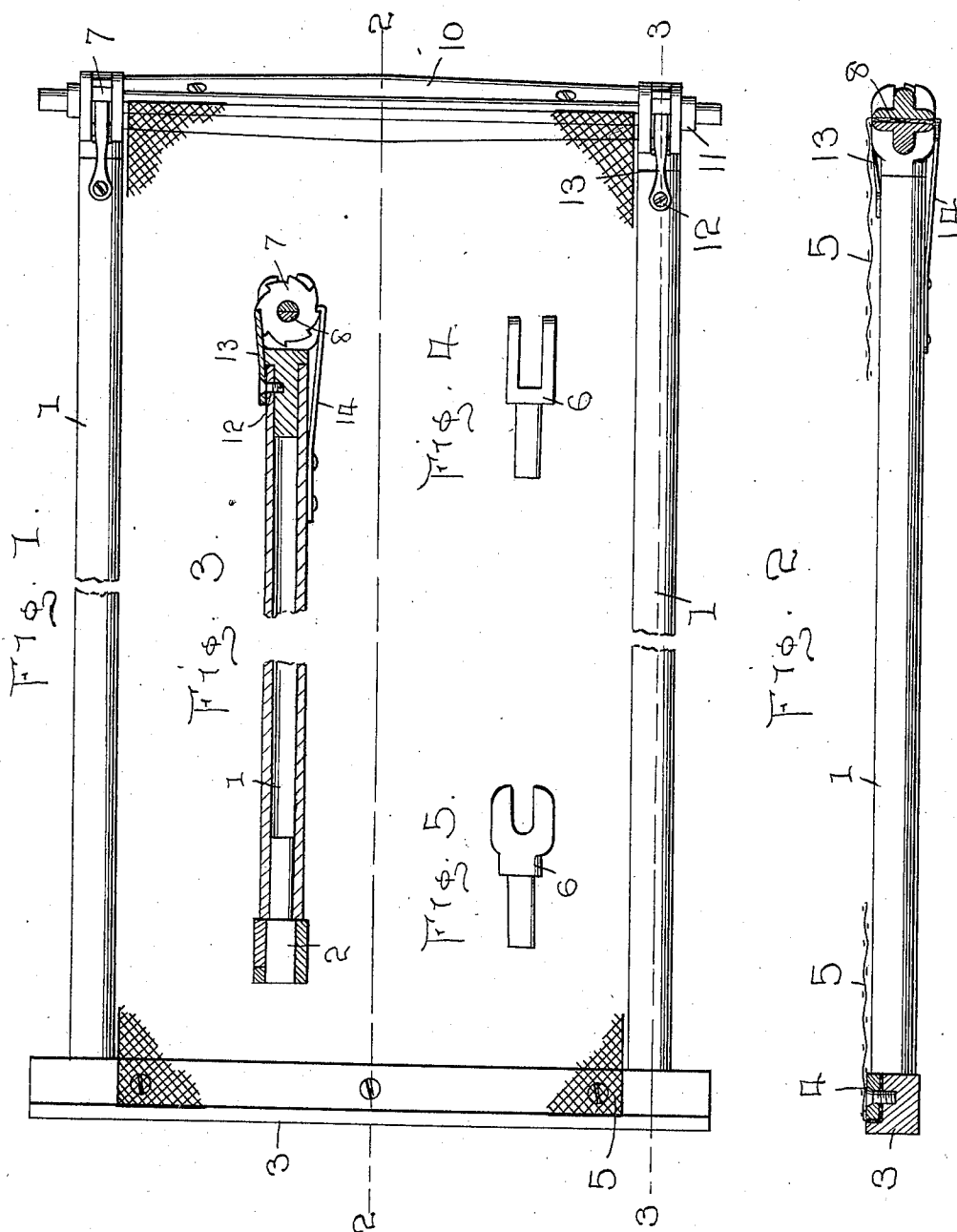


F. W. ZIEMENDORF.
BED SPRING BOTTOM TIGHTENER.
APPLICATION FILED MAY 16, 1911.

1,002,108.

Patented Aug. 29, 1911.



WITNESSES:

Thomas Riley
M. Hendon

F. W. Ziemendorf

BY
W. J. Fitzgerald
Attorneys

UNITED STATES PATENT OFFICE.

FRED W. ZIEMENDORF, OF STEVENS POINT, WISCONSIN.

BED-SPRING-BOTTOM TIGHTENER.

1,002,108.

Specification of Letters Patent. Patented Aug. 29, 1911.

Application filed May 16, 1911. Serial No. 627,435.

To all whom it may concern:

Be it known that I, FRED W. ZIEMENDORF, a citizen of the United States, residing at Stevens Point, in the county of Portage and State of Wisconsin, have invented certain new and useful Improvements in Bed-Spring-Bottom 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 beds and more particularly to bed spring bottom tighteners.

An object of the invention is to provide means whereby the spring bottom of a bed may be readily tightened, as desired.

Another object is to provide a frame for the spring bottom of a bed whereby the tension of the spring bottom may be readily adjusted, as desired.

Another object is to provide a knock down frame for the spring mesh forming the spring bottom, said spring mesh to be secured to the frame in such manner that the tension of the spring may be adjusted as desired.

Another object is to provide a knock down frame of the above stated character, to which is secured one end of the spring mesh, while the opposite end is secured in a roller mounted in the sides of the frame and forming a part thereof, said roller being adapted to be rotated to tighten the bed bottom and means carried by the side rails of the frame for engaging the roller and holding the spring adjusted to the proper degree of tension, and, a further object is to provide a frame with the spring secured thereto in such a manner that the frame may be disassembled and placed with the spring connected thereto in compact form for shipping and other similar purposes.

Other objects and advantages will be hereinafter set forth and pointed out in the specification and claim.

In the accompanying drawings which are made a part of this application, Figure 1 is a top plan view of the frame and spring, showing the latter adjusted to the desired degree of tension. Fig. 2 is a longitudinal sectional view on the line 2—2 of Fig. 1. Fig. 3 is a longitudinal sectional view on line 3—3 of Fig. 1, showing one of the side rails in section. Fig. 4 is a detail top plan view of one of the removable roller holding double claws carried in the upper ends of

the side rails. Fig. 5 is a detail side view thereof.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 represents the side rails, which are preferably formed of hollow tubing and carry in their lower ends the removable tenons 2, the rounded portions of the latter fitting snugly in the ends of the side rails 1, while the rectangular portions thereof are received in similar shaped openings in the lower cross bar 3, which is adapted to rest upon the side rails of the bed, as will be understood, near the foot or lower end of the bed.

Secured to the upper side of the lower cross bar 3 is the board 4, to which is secured one edge of the spring mesh bed bottom 5, said edge being clamped between the board 5 and the cross bar 3. It will be understood that a portion of the upper side of the cross bar 3 is cut away to accommodate the board 4, the latter, when in position, having its upper surface flush with the upper surface of said cross bar 3. Rotatably secured in the upper ends of the side rails 1 are the double claws 6, between the claws of which are adapted to be positioned the ratchet wheels 7 carried upon the roller 8, near the opposite ends thereof.

The roller 8 is preferably formed in halves secured together by screws 9, or other suitable means, and clamping between said halves the opposite edge of the spring bottom 5, opposite to the edge secured to the bottom of the frame, as above described. The roller 8, is provided with the ribs 10, which are higher at the central points thereof and around these ribs the spring bottom 5 is wound when tightening the tension thereof. Thus it will be seen that the spring 5 will be drawn more at the center than at the sides thereof, taking up the slack in the center. The ribs 10 extend to within a short distance of the opposite ends of the roller. Spaced from the ends of these ribs are the ratchet wheels 7, previously mentioned, and outwardly of these are the collars or flanges 11. The extremities of the roller may be squared to receive a wrench (not shown) for rotating the roller.

The roller 8 is positioned so that the ratchet wheels 7 thereof are located between the parallel portions of the double claws 6,

the ends of the ribs 10 bearing against the inner sides of the double claws, while the flanges 11 bear against the other sides, thus, preventing the roller from moving longitudinally or from rattling. Carried by a screw 12 secured through each side rail 1 and into the rounded portion of the double claw carried therein, is a flat pawl 13, which normally engages with the teeth of the adjacent claws of the double claw and resting against said teeth of said ratchet wheel. Secured to the opposite side of each side rail 1 is one end of the spring pawl 14, the free bent end of which engages the teeth of the ratchet wheel 7 at a point opposite the engagement thereof by the flat pawl 13. The pawl 13 and its securing screw 12 serves to hold the double claw 6 against rotation, while the spring pawl 14 readily springs back of the teeth of the ratchet wheel as they pass, preventing the roller 8 from rotating in the opposite direction.

When it is desired to tighten the tension of the spring bottom 5, a suitable wrench is engaged upon the end of the roller 8 and the latter rotated to wind the upper end of the spring 5 upon the ribs 10 of the roller, taking up the extra slack in the central longitudinal portion of the spring. This is specially desirable as it is a well known fact that the bed spring bottom sag to a greater extent in the central portion than to the side edges. As the roller 8 is rotated and the teeth of the ratchet wheels 7 pass the pawls 13 and 14 the latter engage back of said teeth and prevent backward rotation of the ratchet wheels 7 and the roller 8.

When it is desired to place the framework and the spring in compact form for shipping, storing and other purposes, the screws 12 are loosened sufficiently to allow the pawls 13 to be swung to one side and the spring pawls 14 are drawn away from engagement with the teeth of the ratchet wheels 7 to allow the roller 8 to rotate and the spring bottom 5 to be loosened, after which the rollers 8 may be turned out of the double claws 6. The side rails 1 are then drawn out of the lower cross bar 3 and the spring wound upon the ribs 10 of the roller 8, until the latter is adjacent the lower cross bar 3. The side rails may then be placed opposite the roller 8 and the lower cross bar 3, presenting a comparatively small package. If desired, the tenons 2 may be drawn out of the side rails, as may also the double claws 6, it being understood that the screws 12

have previously been removed with the straight pawls 13, or at least unscrewed far enough to allow the withdrawal of said claws. These small pieces may then be strapped or wrapped together in a separate package. The object in removing these smaller parts is the shortening of the side rails 1, making them practically the same length as the bottom cross bar 3.

It will be evident that the average person may assemble the parts properly, without the aid of one skilled in this line. The task of forming the complete frame will only require an expenditure of a few minutes and the minimum amount of labor. It will also be evident that this form of bed bottom may be used upon the present type of bedsteads without any change or alteration thereof, the outer ends of the lower cross bar 3 and of the roller 8 being placed upon the side rails of the bedstead, as will be understood.

Owing to the extreme simplicity of the parts employed, the entire device may be manufactured at a low figure and, as it may be used upon any bedstead now upon the market, it will last indefinitely. It will be apparent that should any of the parts become broken or worn, they may be replaced at a slight cost.

What I claim is:

A bed spring bottom comprising a frame composed of side rails having double claws removably secured within their upper ends and tenons removably secured in their lower ends, a lower cross bar within which the tenons are adapted to be received, a sectional roller provided with ribs and adapted to be received for rotation in the double claws carried by said side rails, a board secured to said lower cross bar, wire mesh having one of its edges positioned between said cross bar and said board and adapted to be clamped thereby, said mesh having its opposite edge clamped between the sections of said roller, said roller being adapted to be rotated to wind the adjacent portion of said mesh over the ribs of said roller, and means carried by said rails for holding said roller in rotated position to retain said mesh at the proper degree of tension.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRED W. ZIEMENDORF.

Witnesses:

EDGAR D. WILLIAMS,
EMIL GYRIM.