

No. 674,380.

Patented May 21, 1901.

C. H. HARD.

METALLIC TRUSS FOR WOVEN WIRE MATTRESSES AND METALLIC BEDSTEADS.

(Application filed Nov. 3, 1899.)

(No Model.)

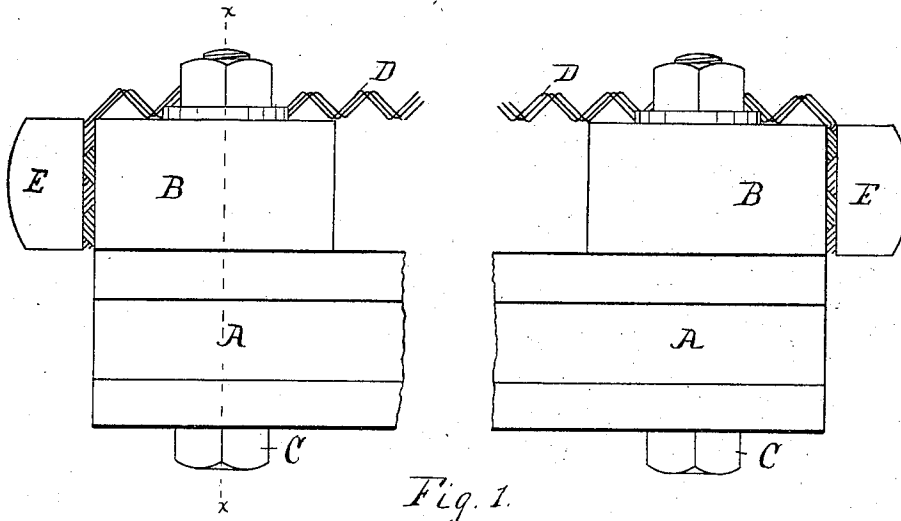


Fig. 1.

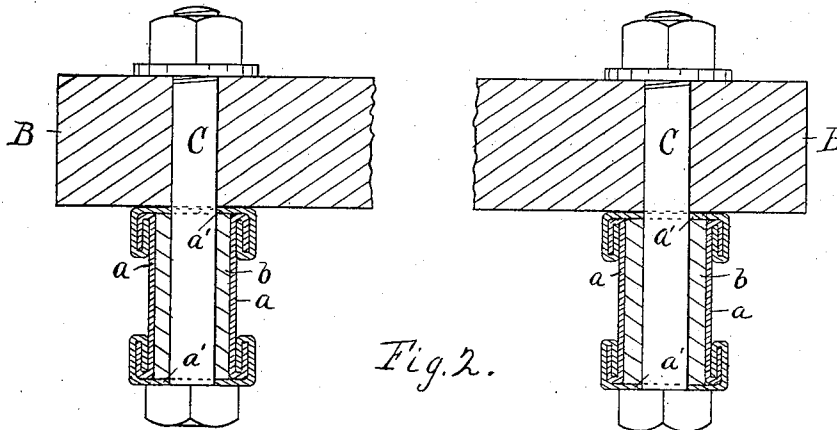


Fig. 2.

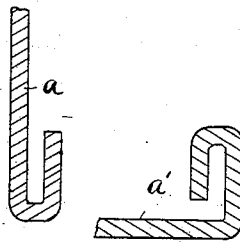


Fig. 3.

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UNITED STATES PATENT OFFICE.

CHARLES H. HARD, OF BUFFALO, NEW YORK.

METALLIC TRUSS FOR WOVEN-WIRE MATTRESSES AND METALLIC BEDSTEADS.

SPECIFICATION forming part of Letters Patent No. 674,380, dated May 21, 1901.

Application filed November 3, 1899. Serial No. 735,662. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. HARD, a citizen of the United States, residing at the city of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Metallic Trusses for Woven-Wire Mattresses and Metallic Bedsteads, of which the following is a full, clear, and exact description.

My invention relates to the form and construction of metallic trusses, and more particularly to the form and construction of metallic trusses employed in the manufacture of woven-wire mattresses and metallic bedsteads.

In the manufacture of the framework of wire mattresses of the ordinary and well-known type it has been customary heretofore to employ wood side rails or trusses and cross-pieces at the ends, also of wood, the side rails and end pieces being firmly secured together and the end pieces carrying the woven wire or fabric secured thereto. In order that the side rails may be strong enough when made of wood to resist the strain of the fabric and to retain their shape, the cross-section must necessarily be large, with the result that the framework is heavy, clumsy, and, notwithstanding the large amount of timber employed, is liable to warp and bend and render the surface uneven. Furthermore, with the growing scarcity of the quality of timber which must be employed in the construction of such side rails construction in wood is not only undesirable on account of the increased weight, but is undesirable on account of the rapidly-increasing cost of the lumber employed. My invention dispenses with the use of wood for the side rails or trusses, very materially reducing the weight of the frame and at the same time affording a truss which is absolutely rigid and which preserves absolute uniformity of tension of the spring-bed itself. In like manner in the construction of the side rails of metallic bedsteads the use of ordinary angle-iron is expensive, heavy, and liable to bend or become displaced. My truss may be used with the same advantages in the manufacture of metallic bedsteads as when employed in the manufacture of wire-mattress frames.

Referring to the drawings herewith, con-

sisting of one sheet, in which like letters refer to like parts, I shall describe my invention as applied to woven-wire mattresses.

Figure I is a longitudinal elevation of my invention broken away at the center and showing the ends of the truss. Fig. II is a vertical section at right angles to Fig. I on the line *xx* of Fig. I. Fig. III is a detail sectional view, on an enlarged scale, showing the manner and form of union of the sections of the truss or side rail.

A represents the truss or side rail, which will be hereinafter more fully described.

B represents the end or cross pieces, made of wood or metal in the usual form, securely bolted to the trusses A by means of bolts C. The cross-pieces B carry the wire fabric D, secured to the cross-pieces B by means of cleats E, secured in the usual and well-known form.

Referring now particularly to Fig. II, I will describe the manner and form of construction of my metallic truss or side rail. This truss is made up of four sections, which I have indicated as *a* and *a'*. The sections *a*, which are the vertical sections, have their upper edges bent first outwardly and then downwardly and their lower edges bent first outwardly and then upwardly. The upper horizontal section has its edges bent first downwardly, then inwardly, and then upwardly, and the lower horizontal section has its edges bent first upwardly, then inwardly, and then downwardly. The sections *a* and *a'* thus united and securely flanged together form and constitute a rigid rectangular truss, which may be made of any desired size to accommodate the size of the bed-frame constructed. These sections, made of the proper length, should be properly drilled (top and bottom) to receive the bolts C, and in order that the pressure of the bolt when drawn down tight by its nut may not crush or distort the truss from either end I usually insert or drive in a wooden block *b*, which is bored concentric with the boring of the truss to receive the bolts C. These blocks extend only a comparatively short distance from the ends inwardly past the line of the bolt-holes, the main portion of the truss being entirely open. It will at once be seen that by this form of construction I secure a truss that is absolutely

rigid, easy of construction, light in weight, and, as a matter of fact, very much cheaper than the common construction in wood. While it is possible to form such a truss by forming the compound bends upon the vertical portions *a* rather than upon the horizontal portions *a'*, such construction results in a smaller degree of rigidity upon the lines required and a smaller degree of desirability in construction, and I therefore prefer the construction herein shown.

From this description it is evident that my truss may be employed with equal facility in a metallic bedstead, and the slight modification involved would be apparent to any one skilled in the art.

Having thus described my invention, and without limiting myself to the specific construction herein shown, what I claim is—

A sheet-metal truss, consisting of four longitudinal sections flanged together, the upper horizontal section having its edges bent first downwardly, then inwardly and then upwardly, the vertical sections having their upper edges bent first outwardly and then downwardly, and having their lower edges bent first outwardly, then upwardly, and the lower horizontal section having its edges bent first upwardly and then inwardly and then downwardly, the said four sections being thus united and flanged together into a stable and rigid truss, substantially as described.

In witness whereof I have hereunto set my hand this 24th day of October, 1899.

CHARLES H. HARD.

Witnesses:

D. B. TUTTLE,
MYRA E. SNYDER.