No. 861,508. PATENTED JULY 30, 1907.

O. G. FRANKS.

BED.

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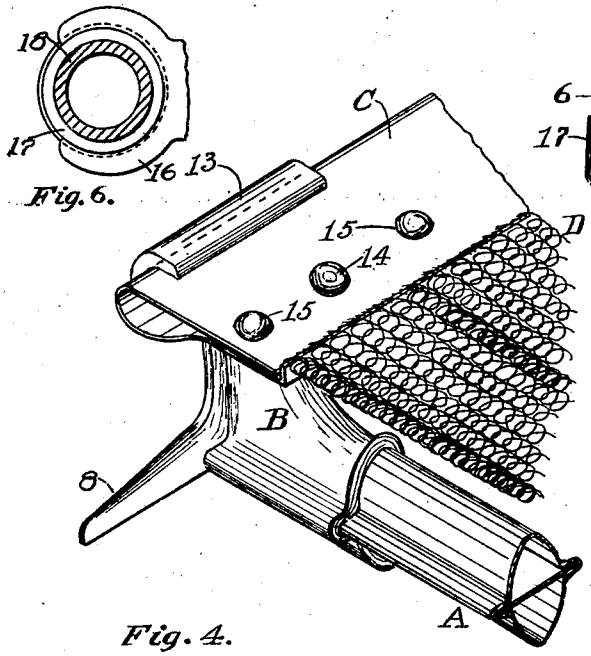


Fig. 6.

Fig. 4.

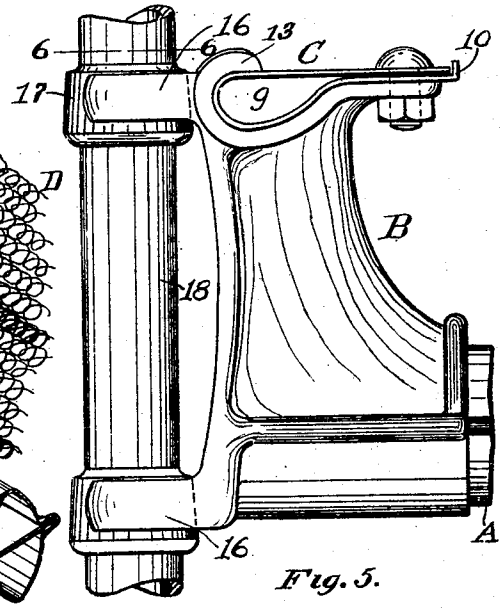


Fig. 5.

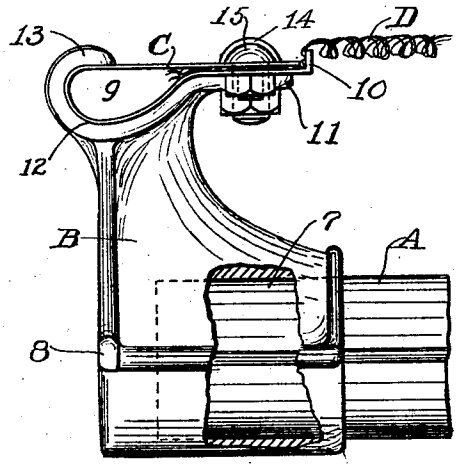


Fig. 1.

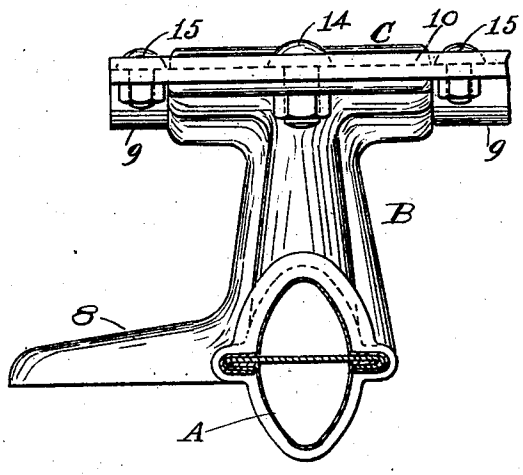


Fig. 2.

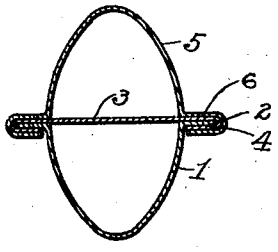


Fig. 3.

WITNESSES

William Wheeley.

Carrie R. Ivy.

INVENTOR

Orrin G. Franks

By Cyrus Kohr

Attorney

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ORRIN G. FRANKS, OF KENOSHA, WISCONSIN.

BED.

No. 861,508. Specification of Letters Patent. Patented July 30, 1907.

Application filed March 24, 1906. Serial No. 307,793.

To all whom it may concern:

Be it known that I, ORRIN G. FRANKS, a citizen of the United States, residing at Kenosha, in the county of Kenosha and State of Wisconsin, have invented a new and useful Improvement in Beds, of which the following is a specification, reference being had to the accompanying drawing.

My improvement relates particularly to bed bottoms comprising rectangular frames and a woven wire or similar fabric supported by said frame.

The object of the invention is to produce such a bed bottom having a light and strong frame formed in part or entirely of metal. In the form illustrated by the accompanying drawings, said frame is composed entirely of metal, the end rails and the side rails being formed of sheet metal and the corner blocks which join the end rails and the side rails being of malleable iron.

In said drawings, Figure 1 is a side elevation of one corner of such a bed bottom; Fig. 2 is an elevation looking toward the right of said portion as shown by Fig. 1; Fig. 3 is a transverse sectional view of one of the side rails; Fig. 4 is a perspective view of the portion of the bed bottom shown by Figs. 1 and 2; Fig. 5 shows a modification of the form shown by Fig. 1; Fig. 6 is a section on the line, 6—6, of Fig. 5.

As such bed bottoms are well known to those familiar with this art, I deem it unnecessary to illustrate an entire frame.

Referring to said drawings, A is a side rail; B is a riser or corner block; C is an end rail; and D is a coiled wire or other horizontal fabric extending from one end rail to the other.

The side rail, A, is oval or elliptical in cross-section and is composed of three pieces, as follows: a lower trough-form sheet of metal, 1, having its upper edges turned outward to form horizontal flanges, 2; a horizontal metal sheet, 3, extending across the piece, 1, and having its edges, 4, bent closely around beneath the flanges, 2; and an inverted trough-form piece of sheet metal, 5, resting upon the sheet, 3, and having lateral flanges, 6, extending around the seam formed by the margins of the plates, 1 and 3. A rail of such form, although made of relatively thin sheet metal, is very strong.

The riser, B, is cast with a horizontal opening or mortise, 7, conforming to the exterior of the rail, A. Said rail may be secured in said mortise in any suitable manner. One such method is to insert said rail into said mortise and then compress the malleable metal of said riser around said rail.

Each riser, B, has an arm or spur, 8, extending horizontally away from the frame at right angles to the length of the adjacent rail. The purpose of such spurs or arms is to engage the usual ledges or shoulders on the inner faces of the side rails of an ordinary bed-stead, so that the bed-stead supports the bed bottom at each of the four corners of the latter.

The end rails, C, are secured to the upper portions of the risers. Each such rail is formed of a piece of sheet metal as long as the length of the rail and approximately twice as wide as the width of the rail. This sheet is folded upon itself so that the portions adjacent the lateral or long edges will rest flatwise upon each other, while the middle portion of said sheet forms a tube, 9, extending the entire length of the rail. One of the side edges of said sheet may be bent perpendicular to the sheet to form a lip, 10, extending over the other lateral edge of the sheet. The edge of the rail comprising said side edges of the sheet is directed toward the middle of the bed, and said edge may be termed the inner edge.

The upper end of each riser, B, is made to conform to the lower face of the end rail. In the form shown in the drawings, the upper half of the sheet constituting the rail is left straight and horizontal, so that the tube, 9, extends below the level of the upper portion of the sheet and below the inner portion of the lower leaf or section of the sheet. The riser has at its inner portion (the portion directed toward the opposite end of the bed) a projecting horizontal portion, 11, upon which the inner horizontal portion of said rail may rest, and outward from said horizontal portion is a depression, 12, of proper form to receive the tubular portion, 9, of said rail. To facilitate the engagement of said rail with the riser, a hook-form flange, 13, extends upward and inward around and over the inner or tubular portion of said rail, the length of such flange being so limited as to admit the insertion of the tubular portion of the rail, when the riser is to be applied by moving it transversely to the rail. But if the riser is to be moved parallel to the length of the rail, said flange may extend farther inward. As a further means of securing said rail to the risers, a bolt, 14, is extended through the inner portion of said rail and the portion, 11, of the riser. Obviously, more than one such bolt may be used.

The end edges of the fabric, D, are clamped between the inner portions of the sheet constituting the end rail. The lip or flange, 10, compels the bending of the fabric at approximately right angles, at two places, and increases the engagement of the fabric by the rail. Said lip also adds to the rigidity of the rail. Any suitable means may be used for binding or clamping the edges of said sheet to the fabric. For this purpose, the drawings show upright bolts, 15, extending through the inner portion of the rail and through the fabric, D.

In assembling the parts of the bed bottom, the risers

may be secured to the side rails, A, and the end rails clamped to the fabric, D, in a suitable press, one end rail then secured to the risers of the adjacent ends of a pair of side rails, then drawing the opposite end rail into place upon the adjacent risers, and then inserting the bolts, 14.

To adapt the bed bottom for attachment directly to end frames, without the use of side rails, making what is termed a three-piece bed-stead, each riser may be provided with means for engaging one of the pillars or some adjacent portion of an end frame.

In Figs. 5 and 6 of the drawings, such provision is made by placing upon the outer portion of the riser two pairs of lugs, one pair being located above the other, and the middle portion of each lug being curved outward away from the other lug, whereby each such pair is adapted to partially surround and engage a conical portion, 17, on a pillar, 18, of an end frame of a bed-stead.

I claim as my invention:

1. In a bed bottom frame, side rails, metallic corner blocks or risers having each a horizontal portion, 11, and a recess, 12, and end rails resting in said recesses and on said horizontal portions, and bolts extending through said end rails and said horizontal portions, substantially as described.

2. In a bed bottom frame, side rails, metallic corner blocks or risers having each a horizontal portion, 11, and a recess, 12, and end rails formed of folded sheet metal resting in said recesses and on said horizontal portions, and bolts extending through said end rails and said horizontal portions, substantially as described.

3. In a bed bottom frame, side rails, A, metallic risers, B, and sheet metal end rails, C, comprising a tubular portion, 9, and parallel marginal portions, and bolts binding said rails to said risers, substantially as described.

4. In a bed bottom frame, side rails, A, metallic risers, B, having a hook, 13, and sheet metal end rails, C, comprising a tubular portion, 9, and parallel marginal portions, and bolts binding said rails to said risers, substantially as described.

5. In a bed bottom frame, side rails, A, metallic risers, B, and sheet metal end rails, C, comprising a tubular portion, 9, parallel marginal portions, and a lip or flange, 10, and bolts binding said rails to said risers, substantially as described.

6. In a bed bottom frame, side rails, A, metallic risers, B, having means for engaging said end frames, and sheet metal end rails, C, comprising a tubular portion, 9, and parallel marginal portions, and bolts binding said rails to said risers, substantially as described.

In testimony whereof I have signed my name, in presence of two witnesses, this sixteenth day of March, in the year one thousand nine hundred and six.

ORRIN G. FRANKS.

Witnesses:
HENRY J. HASTINGS,
M. F. BARBER.