No. 620,880. Patented Mar. 14, 1899.

G. W. BENT.

BED BOTTOM.

(Application filed June 15, 1897.)

(No Model.) 2 Sheets—Sheet 1.

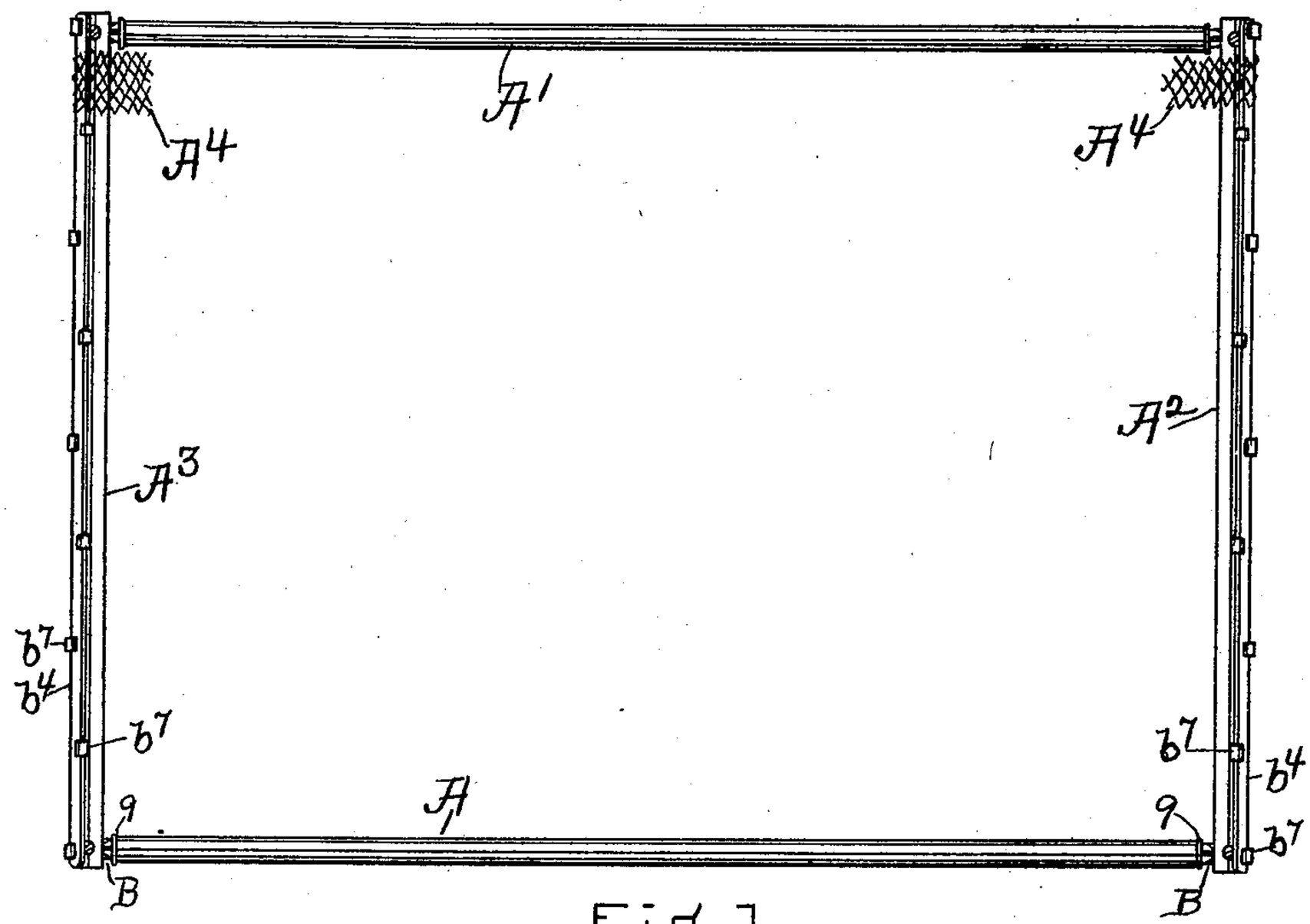

Fig. 1.

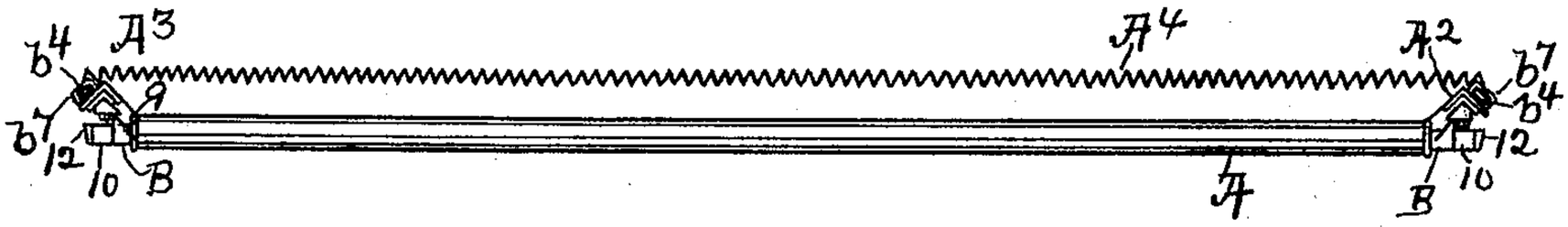

Fig. 2.

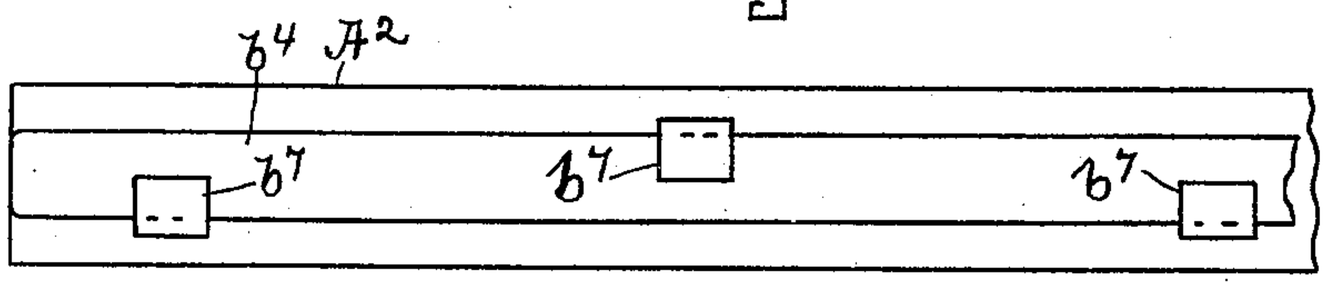

Fig. 2a

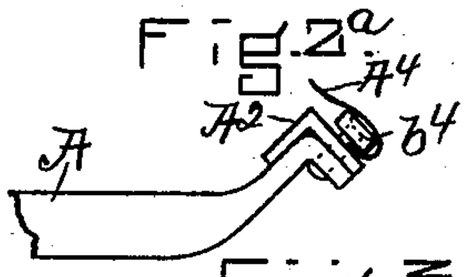

Fig. 3.

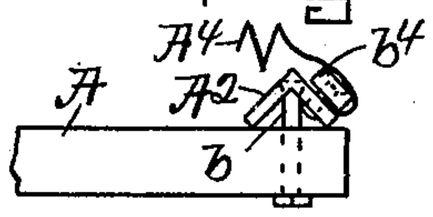

Fig. 4.

WITNESSES.

Matthew M. Blunt.

J. Murphy.

INVENTOR.

George W. Bent

by Jas. H. Churchill

ATT'Y

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BED BOTTOM.

(Application filed June 15, 1897.)

(No Model.) 2 Sheets—Sheet 2.

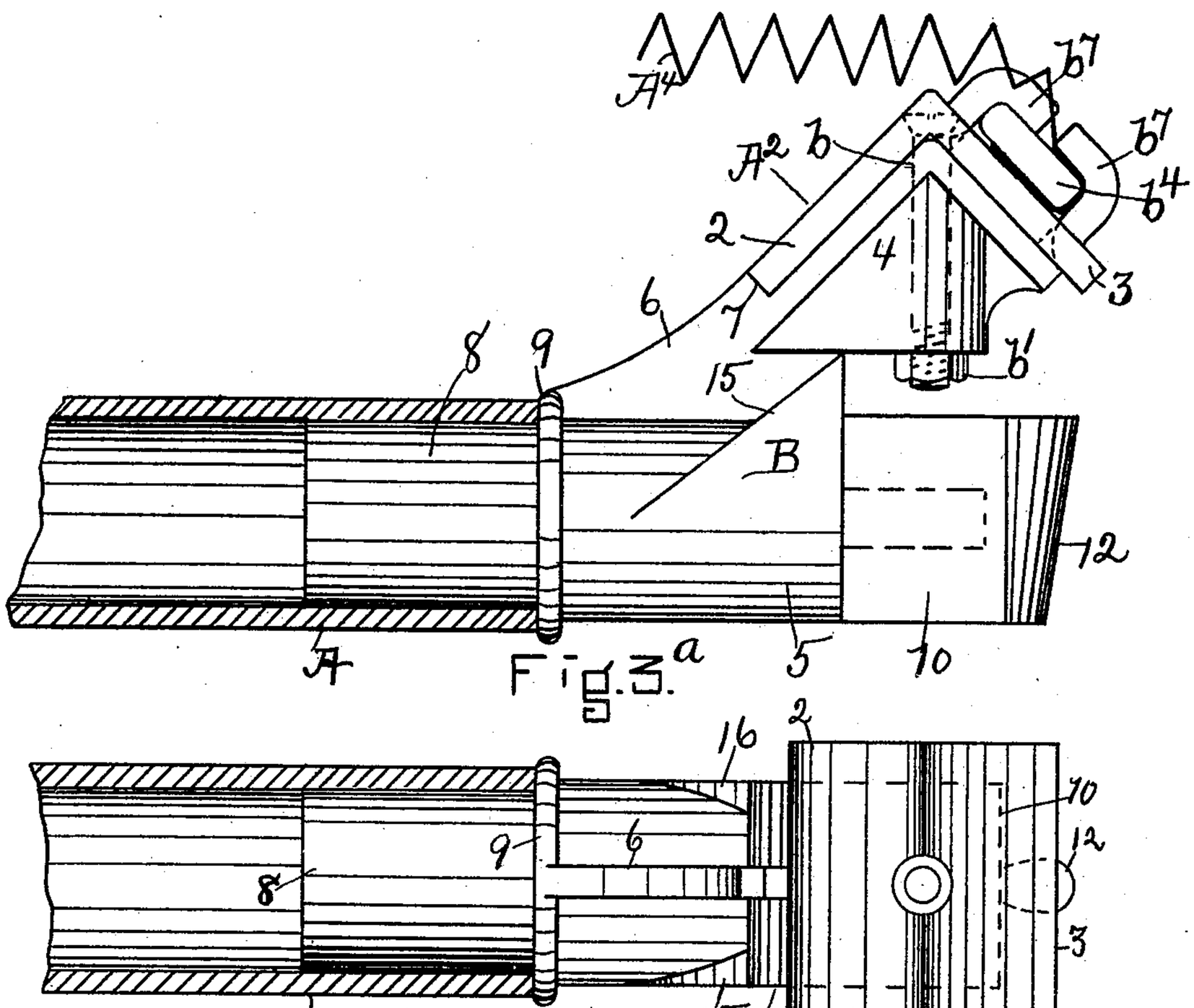
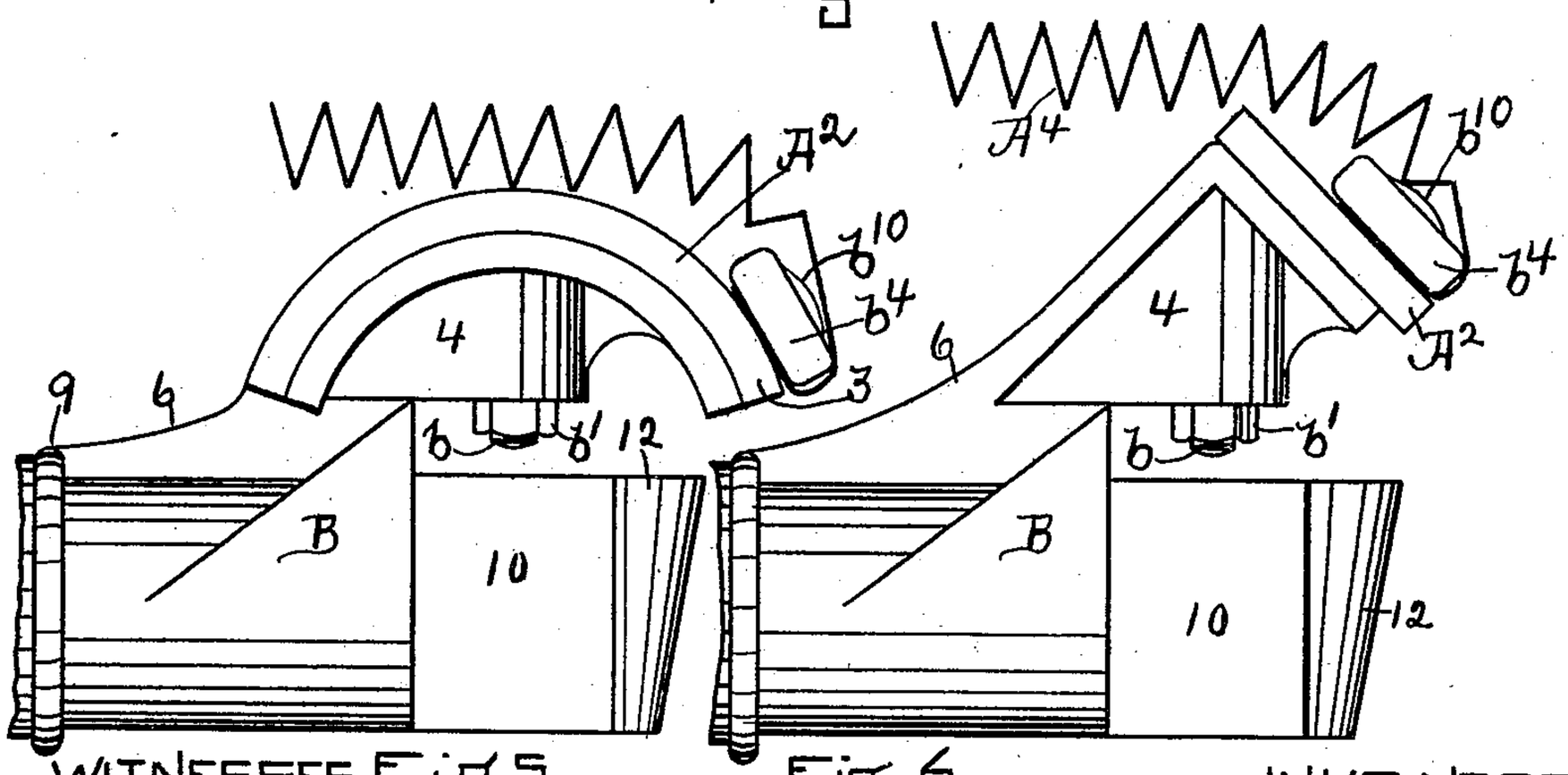


Fig. 3.

Fig. 4.



WITNESSES. Fig. 5.

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Fig. 6.

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UNITED STATES PATENT OFFICE.

GEORGE W. BENT, OF HYDE PARK, MASSACHUSETTS.

BED-BOTTOM.

SPECIFICATION forming part of Letters Patent No. 620,880, dated March 14, 1899.

Application filed June 15, 1897. Serial No. 640,820. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. BENT, residing in Hyde Park, county of Norfolk, and State of Massachusetts, have invented an Improvement in Bed-Bottoms, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

This invention relates to spring bed-bottoms of that class in which the end rails are composed of metal and in which a woven-wire mattress is attached to the end rails of the said bed-bottom.

This invention has for its object to improve, simplify, and cheapen the cost of the bed-bottom, and, further, to provide a novel fastening for the ends of the woven-wire mattress.

In accordance with this invention the end rails of the bed-bottom are preferably made substantially arch-shaped and are secured to raised portions attached to the side rails and provided with downwardly-extended rear sides. The raised portions referred to may be made as castings or blocks of substantially the shape of the under side of the arch-shaped end rails, so that the said end rails may fit upon and be firmly secured to said blocks or castings. The blocks or castings are preferably provided with a shoulder against which the front side or edge of the end rail abuts to relieve the devices which fasten the end rails to the castings or blocks from strain.

The woven-wire mattress, in accordance with this invention, is preferably carried over the highest point of the raised portion and end rail and secured to the downwardly-extended rear side of the said end rail by a fastening strip, bar, or rod, which is secured to the said end rail below the top or highest point thereof preferably, as will be described, so that the strain placed upon the end rail by the woven-wire mattress, especially when supporting weight, will be distributed in the direction of the width of the end rail or substantially edgewise, which method of distributing the strain enables the end rail to be made substantially light, thereby cheapening the cost of manufacture and reducing the weight of the bed-bottom.

These and other features of this invention will be pointed out in the claims at the end of this specification.

Figure 1 is a plan view of a bed-bottom embodying this invention, only a portion of the woven-wire mattress being shown; Fig. 2, a side elevation of the bed-bottom shown in Fig. 1; Fig. 2^a, a detail of one of the end rails, to be referred to; Figs. 3 and 4, modifications, to be referred to; Fig. 3^a, a detail in side elevation and on an enlarged scale of the form of end rail and its supporting casting or block preferred by me; Fig. 4^a, a plan view of the supporting casting or block shown in Fig. 3^a; Fig. 5, a modification, to be referred to; and Fig. 6, a side elevation of a modified form of end rail and illustrating a different mode of securing the fastening strip or bar.

Referring to Fig. 1, A A′ represent the side rails, and A^2 A^3 the end rails, of a spring bed-bottom embodying this invention, the woven-wire fabric or mattress A^4 being fastened to the end rails, as will be described. The side rails A A′ are preferably made of tubes of steel or iron, and the end rails A^2 A^3 are preferably made of substantially arch-shaped pieces of metal, which are secured to the side rails, preferably by castings or blocks B, of the construction herein shown and which will be hereinafter described.

The end rails A^2 A^3 may and preferably will be made of angle-iron and comprise front and rear inclined sides 2 3, (see Figs. 2^a and 3^a,) which are fitted over and rest upon correspondingly-shaped raised portions or heads 4, secured to or forming part of the end blocks or castings B, the said heads, as shown, being connected to the lower portion 5 of the said castings by an inclined web 6, preferably provided with a shoulder 7, against which the lower edge of the front side 2 is adapted to abut, for a purpose as will be described. The lower portion 5 of the casting or end block B is preferably made cylindrical in form, so that its end 8 may extend into the end of the metal tubular side rail, and the said lower portion is preferably provided with a collar or annular flange 9, which forms a stop to limit the movement of the said lower portion into the tubular side rail. The lower portion of the end casting or block B may have secured to it a metal piece 10, provided with a taper-

ing nose 12, which is designed to fit into a tapering socket in a block or casting attached to the head and foot frames of the bedstead and not herein shown; but I do not desire to limit myself to this particular means for attaching the bed-bottom to the head and foot frames.

The lower portion 5 of the end block or casting B may be connected to the raised portion or head 4 by reinforcing side webs 15 16.

The substantially arch-shaped end rails may be secured to their supporting end blocks or castings B, as herein shown, (see Fig. 3ª,) by means of screws or bolts *b*, extended through suitable holes in the end rails and head 4 of the casting B, the said screws or bolts being countersunk into the end rails and fastened on the under side of the head 4 by nuts *b'*, the said head being raised above the nose-piece or block 10 a sufficient distance to afford ample room to put on and take off the said nut.

The substantially arch-shaped end rails may be made light and yet be of sufficient strength to resist the tendency to buckle under strain placed upon them by the wire fabric A^4, which latter supports the weight of a person or persons.

The woven-wire fabric may and preferably will be secured to the rear side of the arch-shaped end rail by means of a fastening-strip, bar, or rod b^4, which may be flat or round and which is herein shown as flat. The fastening-bar b^4 may be secured to the end rail as shown in Figs. 2ª and 3ª or as shown in Figs. 5 and 6.

In Figs. 2ª and 3ª the bar or strip b^4 is shown as secured by lugs or fingers b^7, which are preferably integral with the end rail and struck up therefrom, and after the wire fabric has been placed or folded under the lower edge of the said bar the said fingers are hammered or bent down over upon the fastening-bar, as represented in Figs. 2ª and 3ª, to firmly secure the end of the woven-wire fabric to the end rail. Instead of securing the fastening-bar to the end rail by fingers integral with the end rail it may be secured by screws b^{10}, extended through the said bar and end rail, as represented in Figs. 5 and 6.

I may prefer to use the angle form of the substantially arch-shaped end rail shown in Figs. 2 and 3ª; but I do not desire to limit my invention in this respect, as the end rail may be made in the form of a curve, as represented in Fig. 5, the head or raised portion 4 of the end casting or block having its upper surface correspondingly shaped and the woven-wire fabric being secured to the rear side of the end rail below its top or highest point, as shown in Fig. 5, so that the strain will be transverse across and follow the width of the end rail. Furthermore, I prefer to make the end rails substantially arch-shaped; but I do not desire to limit my invention in this respect, as good results may be obtained with a substantially flat or straight end rail secured to the inclined rear side of the substantially arch-shaped raised portions attached to the side rails and to which the wire fabric is secured by the fastening-bar b^4, as shown in Fig. 6.

By reference to Fig. 6 it will be seen that the wire fabric is fastened to the end rail below its upper edge and that the wire fabric passes over the said upper edge and that the strain is in the direction of the width of the end rail and, as it may be said, edgewise with relation to said end rail.

I prefer the substantially arch-shaped form of end rail and to provide the end block or casting B with a shoulder 7, against which the lower front edge of the arch-shaped end rail may abut, and thereby relieve the fastening-screws *b* from the strain.

I do not desire to limit my invention to the use of the particular end blocks or castings or to the use of the said block or castings, for while I may prefer to use the same the substantially arch-shaped end rails may be secured directly onto the side rails as represented in Fig. 3 or as shown in Fig. 4.

I claim—

1. In a spring bed-bottom, the combination of the following instrumentalities, viz: side rails, metallic end blocks or castings provided with raised portions or heads having their rear sides downwardly extended away from each other, end rails secured to the downwardly-extended rear sides of said castings or blocks so as to incline away from each other, a woven-wire fabric extended over the highest point of the said rails, and fastening strips or bars for the said fabric secured to the said end rails below the upper edge thereof, substantially as and for the purpose specified.

2. In a spring bed-bottom, the combination of the following instrumentalities, viz: side rails, angle-iron end rails, and intermediate end castings attached to the side rails and having V-shaped heads or raised portions upon which the angle-iron end rails are fitted and are secured thereto, substantially as described.

3. In a spring bed-bottom, the combination of the following instrumentalities, viz: side rails, substantially arch-shaped end rails, and intermediate end castings attached to the side rails and having substantially arch-shaped heads or raised portions to which the end rails are secured, and nose-pieces attached to the end castings below the said heads, substantially as described.

4. In a spring bed-bottom, the combination of the following instrumentalities, viz: side rails, substantially arch-shaped end rails, and intermediate end castings attached to the side rails and having substantially arch-shaped heads or raised portions over which the end rails are fitted and secured thereto, a woven-wire fabric, a fastening device for said fabric secured to the end rail below its highest point

and under which the said fabric is folded, and means to secure said fastening device to said end rails, substantially as described.

5. In a spring bed-bottom, the combination of the following instrumentalities, viz: metallic side rails, substantially arch-shaped metallic end rails secured to the said side rails and having inclined front and rear sides 2, 3, a woven-wire fabric, and means to fasten the said fabric to the rear inclined side 3 of the said arch-shaped end rails below the apex of the same, substantially as described.

6. In a spring bed-bottom, the combination of the following instrumentalities, viz: side rails, substantially arch-shaped end rails secured to said side rails, a woven-wire fabric, fastening bars or rods, extended in the direction of the length of the end rails, and lugs or ears attached to the end rails and adapted to be bent down over the fastening bars or rods to firmly secure the woven-wire fabric to the end rails, substantially as described.

7. In a spring bed-bottom, the combination of the following instrumentalities, viz: side rails, raised portions attached to the ends of the side rails and provided with downwardly-extended rear sides, end rails secured to the rear sides of the said raised portions to slope downward in opposite directions, a woven-wire fabric, fastening bars or rods secured to the rear sides of the end rails below the upper edge thereof and under the lower edge of which fastening-bars the said fabric is passed, and means to secure the said fastening-bars to the downwardly-extended end rails, substantially as described.

8. In a spring bed-bottom, the combination of the following instrumentalities, viz: metallic side rails provided at their ends with substantially arch-shaped raised portions, angle-iron end rails comprising the sides 2, 3, secured to the arch-shaped raised portions with their apex uppermost, and a wire fabric secured to the said angle-iron end rails, substantially as described.

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

GEORGE W. BENT.

Witnesses:

JAS. H. CHURCHILL,

J. MURPHY.