No. 626,796. Patented June 13, 1899.

# W. S. PLUMMER.

## CORNER CONNECTION FOR BED FRAMES.

(Application filed Nov. 15, 1898.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

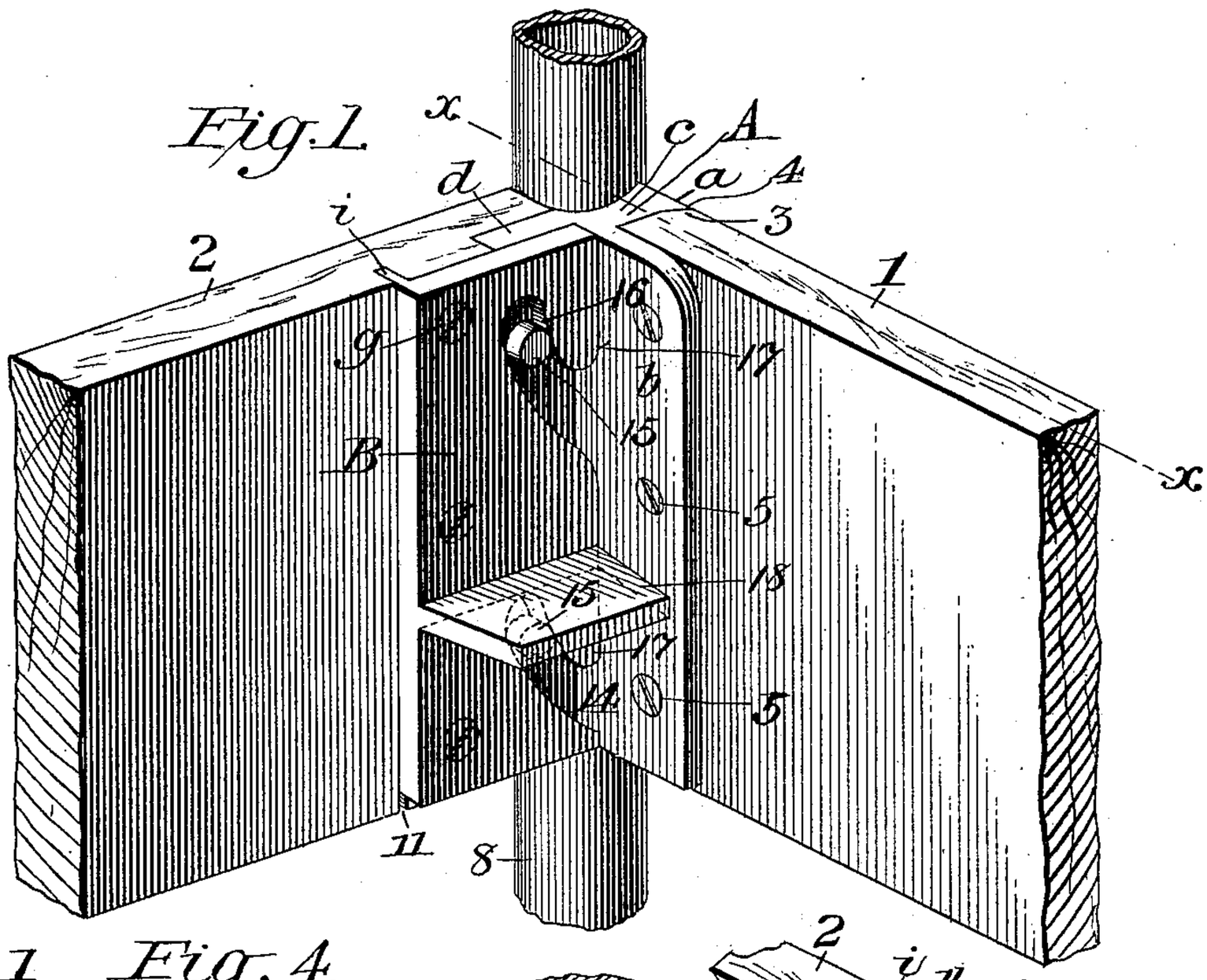



Fig. 4.

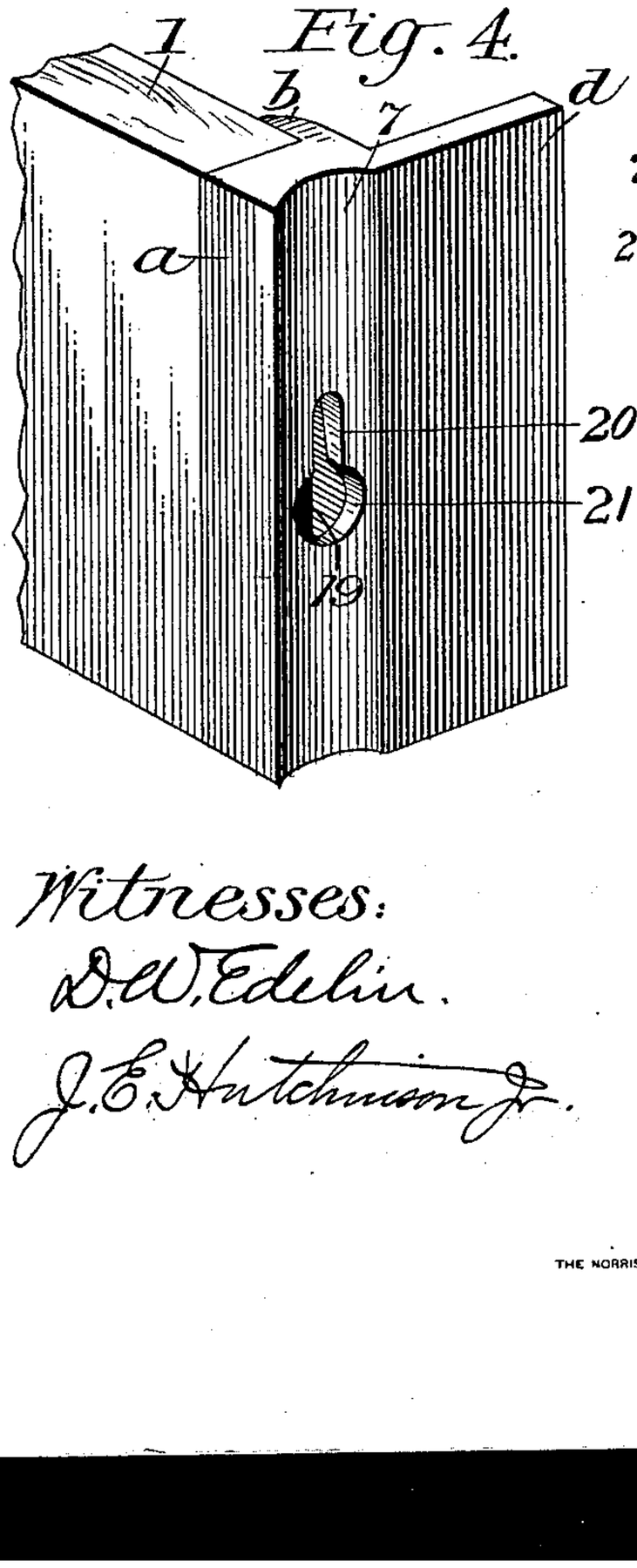



Fig. 5.

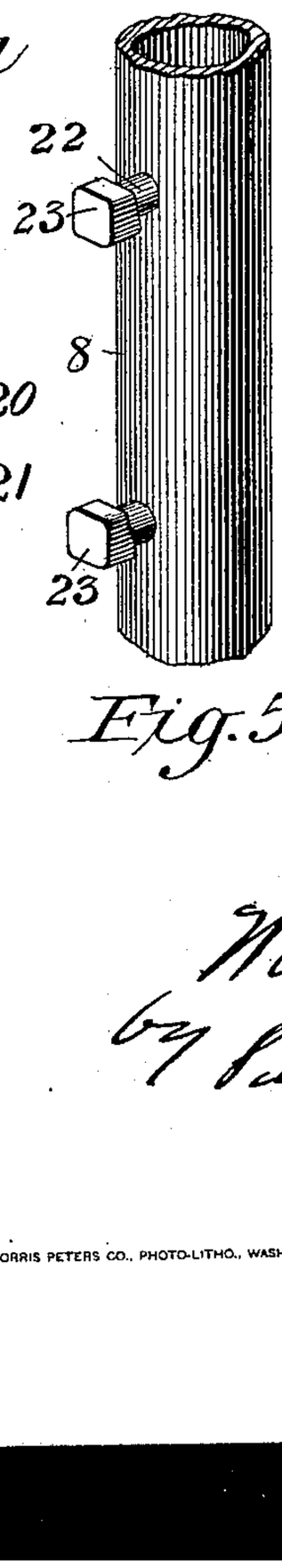
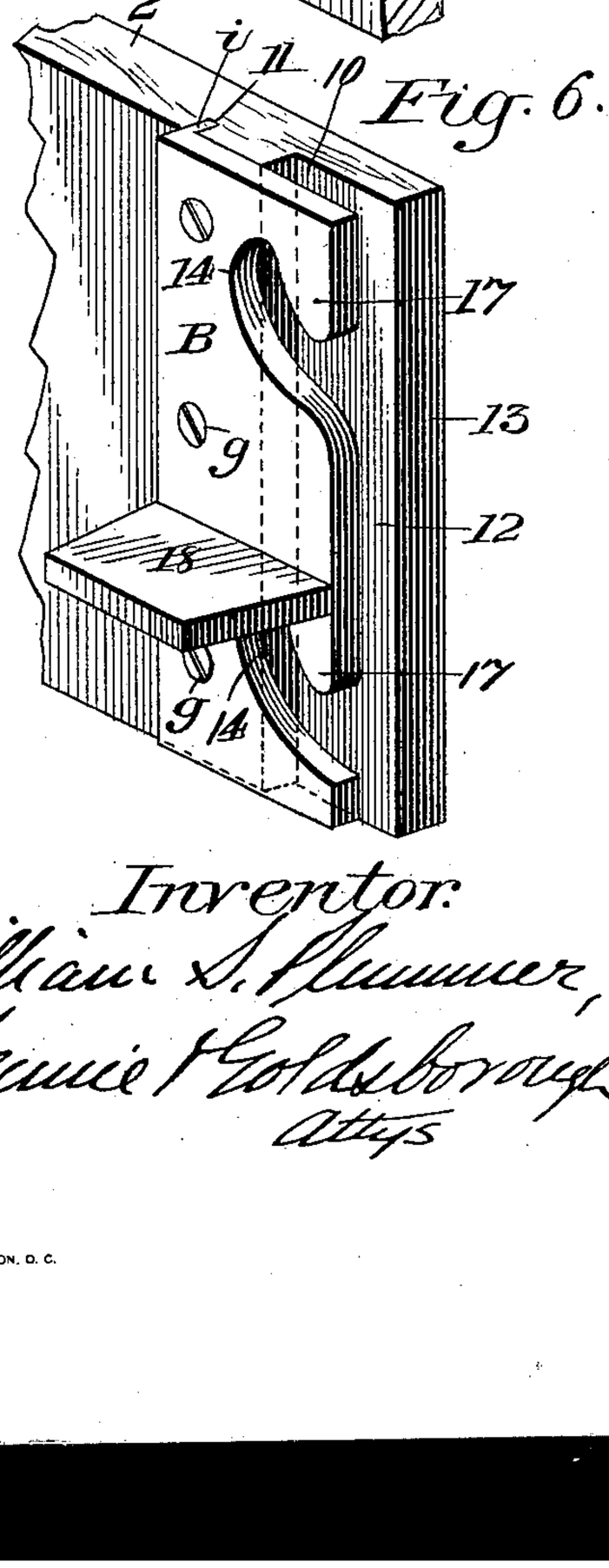



Fig. 6.

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No. 626,796. Patented June 13, 1899.

# W. S. PLUMMER.

## CORNER CONNECTION FOR BED FRAMES.

(Application filed Nov. 15, 1898.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 2.

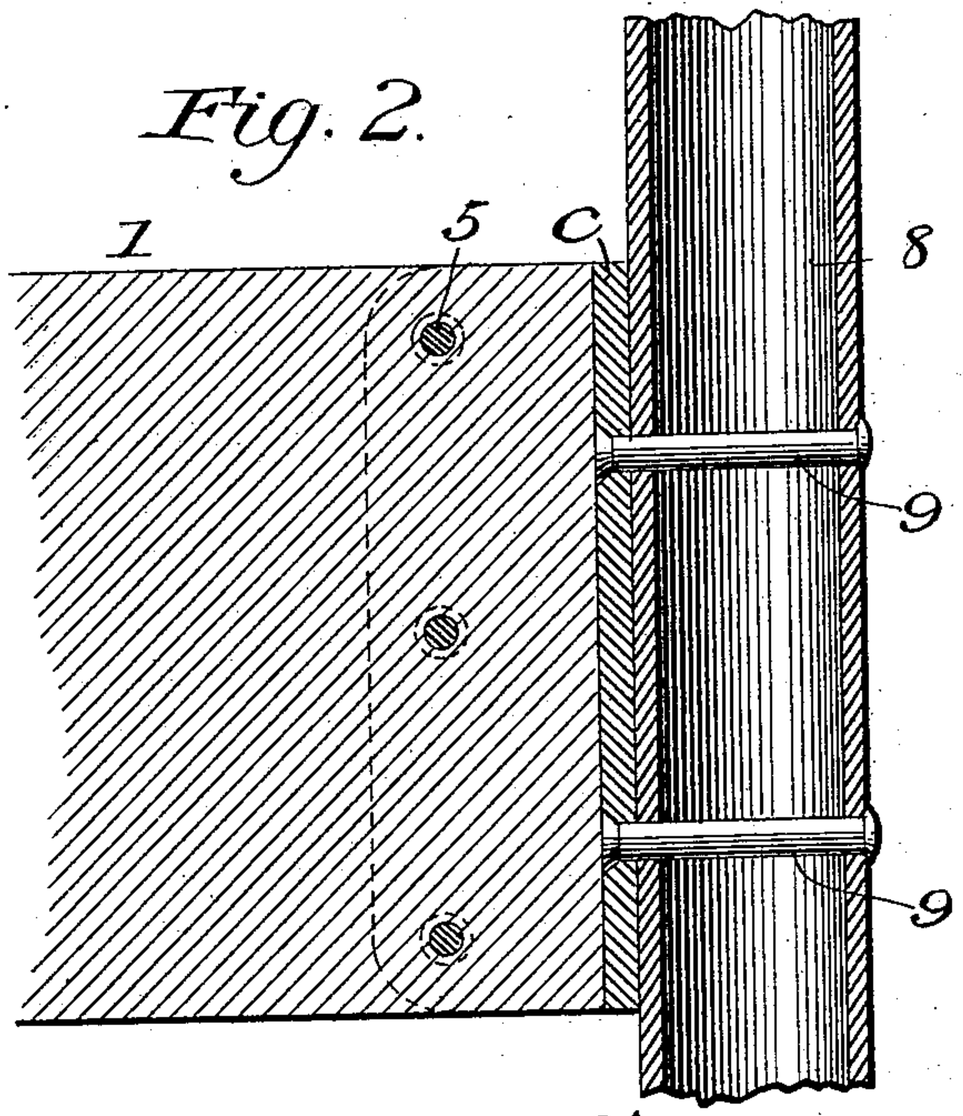
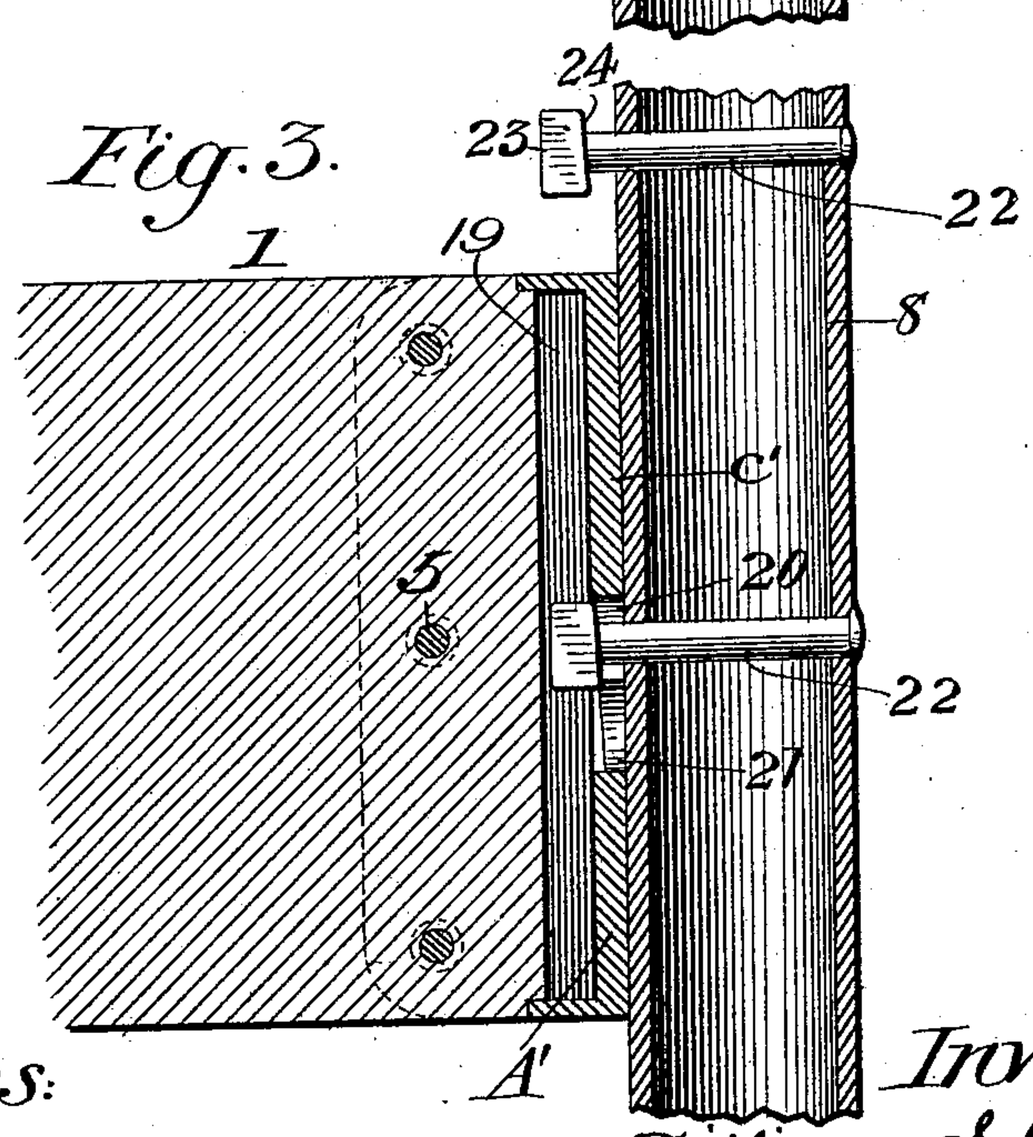



Fig. 3.

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# UNITED STATES PATENT OFFICE.

WILLIAM S. PLUMMER, OF PHILADELPHIA, PENNSYLVANIA.

## CORNER CONNECTION FOR BED-FRAMES.

SPECIFICATION forming part of Letters Patent No. 626,796, dated June 13, 1899.

Application filed November 15, 1898. Serial No. 696,506. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM S. PLUMMER, a citizen of the United States, residing in Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Corner Connections for Bed-Frames; 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 certain new and useful improvements in bedsteads; and it consists, substantially, in such features of construction, arrangement, and combinations of parts as will hereinafter be more particularly described.

The invention has for its object to provide means for detachably connecting the side and end sections of a bedstead and also to provide a close-fitting metallic joint for said sections.

A further object is to provide a close-fitting detachable joint for the end and side sections of a bedstead, comprising a supporting leg or post, which also constitutes a reinforce for the angle of the joint.

A still further object is to provide means for adjusting or altering the height of the bedstead from the floor and also to provide a close-fitting metallic joint between the end and side sections, comprising a detachable leg or post adapted to the joint and interlocking therewith.

The above and additional objects I attain by the means illustrated in the accompanying drawings, in which—

Figure 1 is a view in perspective of portions of a side and end section of an ordinary wooden bedstead and illustrating one form of my improved joint and detachable connection therefor. Fig. 2 is a sectional view thereof on the line $x\,x$. Fig. 3 is a sectional view similar to Fig. 2 and representing another form of my improved joint and detachable connection between the ends of the sections of the bedstead. Fig. 4 is a reverse perspective view of the plate shown in Fig. 3, by which to more clearly indicate the construction thereof for effecting the attachment of the detachable supporting-leg. Fig. 5 is a view in perspective of the detachable supporting-leg and showing the means therein for attachment to the plate shown in Fig. 4. Fig. 6 is a perspective view representing more clearly the construction and arrangement of the notched plate which constitutes a part of the detachable connection or joint between the end and side sections.

My invention is capable of many different embodiments; but in practice I prefer to resort to either one of the constructions, substantially such as are herein shown and which are about to be described. The only difference between the two forms herein shown is that in one instance I make the supporting-post permanent with or substantially an integral part of the detachable connection or joint between the bedstead-sections and in the other I make the said post detachable therefrom.

Referring to the drawings, 1 represents the end section of an ordinary wooden bedstead, and 2 one of the side sections thereof. Attached to one of these sections (preferably the end section) at the end is a metal plate A, which is of suitable thickness and which is also of a length or height equal to the width of the section, so as to bring the upper and lower edge thereof flush or even with the upper and lower edges of said section. Said plate is constituted of an outer vertical rib $a$ and an inner cheek-piece $b$, the two being connected by a web portion $c$, which, as shown, is of a width equal to the thickness of the end section 1. Also formed with said plate is a flange $d$, extending inward at right angles to the cheek-piece $b$. The said flange $d$ constitutes a tenon for the joint between the end and side sections of the bedstead, as will be described, and the same is provided with means which in part constitute the detachable connection between said sections. The outer vertical rib $a$ is of a width exceeding the thickness of the connecting-web $c$, and the end of the section 1 of the bedstead is received snugly between the overlapping side or edge $e$ of said rib $a$ and the cheek-piece $b$. In order to bring the outer surface of said rib $a$ substantially flush or even with the outer surface of the section 1, the outer corner 3 of said section is beveled off, and the inner surface of the overlapping side or edge of the rib is correspondingly shaped at 4 by increasing the thickness of the metal outwardly where it intersects with the con-

necting-web *c*, substantially as shown. In this way a neat fit and appearance is given to the connection on the outer or exposed side of the joint. I prefer to secure the said plate A to the section 1 by means of screws 5, passing through openings in the cheek-piece *b*, although I can, if desired, secure the same by means of screws passing through openings formed in the web *c*. As shown in Fig. 1, the outer surface of the connecting-web *c* is dished or concaved transversely at 7, so as to adapt it to partially receive in a close-fitting manner the supporting-post 8, which in this instance is round in cross-section and preferably tubular. Said post can be made solid, if desired, and also instead of being round or circular in cross-section the same can be of any other configuration. As shown in Fig. 2, the post is secured to the web *c* by means of screws or rivets 9, so as to be rigid therewith; but in some instances the post can be cast or formed as an integral part of the plate A. A preferred construction is to make said post detachable from the plate in the manner and for the purpose hereinafter set forth. In either case it will be seen that the post, in addition to its function as such, serves the function of reinforce for the angle of the joint between the plates comprising the detachable connection between the sections 1 and 2.

The side section 2 of the bedstead is formed at the end with a rabbet 10 and also a short distance from said rabbet with a transverse channel or groove 11, and attached to the inner side of said side section is a plate B, of a height or length substantially equal to the width of the section, said plate being secured in place by means of screws or rivets *g*, passing through suitable openings therein and entering the section. The outer vertical edge of the plate B is about even with the end of the side section 2, while formed on the inner vertical edge of said plate is an inturned flange *i*, which enters the transverse channel or groove 11 in the section, and thus materially strengthens the fastening between the section and plate and relieving somewhat the strain on the screws or rivets *g*. As thus arranged a space 12 is formed between the plate B and the thinner portion 13 of the side section 2, and which space constitutes a mortise for the reception of the tenon or flange *d* on the plate A, which tenon fits the said mortise snugly, so as to prevent any looseness of joint between the bedstead-sections. The construction described furnishes a tight-fitting joint between the ends of the said sections, and it only remains to detachably connect the two plates A and B in such manner as to maintain the proper vertical relation between the sections 1 and 2, as well as to enable the one section to be supported by the other. This can be effected in various ways; but preferably I form in the outer vertical edge of the plate B suitable notches or recesses 14, into which are received suitable projections or supporting pins or lugs 15, formed or provided on the inner side of the tenon *d*. The said notches 14 are slightly wider than the diameter of the said pins or projections 15, so as to enable the latter to readily enter the former when the end of the side section is connected to the end of the end section, and the upper edge of each of the notches presents a curved or rounded shoulder 16 of gradually-increasing width when measured from the vertical edge of the plate B, and these shoulders rest or bear against the pins or projections 15, with the overhanging portions 17 of the said plate confined tightly between said pins and the cheek-piece *b* of the plate A. The distance between the side of each of the pins 15 and the cheek-piece *b* is less than that across the wider part of the overhanging portion 17, or is equal, say, to about the width of said portion intermediate the lower end thereof and the upper extremity of the notch or recess, and thus it will be seen that when the plates A and B are properly united or joined together the said pins or projections are prevented from passing all the way into the notches. A bearing is thus formed by the shoulder 16, which is practically self-compensating for any wear which takes place between the shoulder and the supporting-pin, since as the wear occurs the pin will pass farther into the notch, while at the same time the desired degree of close joint will be maintained in virtue of the fact that the overhanging portion 17 will be forced to a corresponding extent into the space between the said pin and the cheek-piece of plate A. Formed with the said plate B is a ledge or shelf 18, which constitutes a support for the corner of the usual removable mattress-frame or bed-bottom.

In some instances both the plate B and the cheek-piece *b* of plate A can be set into the sides of their respective bedstead-sections, so as to be flush or even therewith; but preferably I secure the same in place so as to project beyond the sides of said sections, and in this way the sides of the usual bed-bottom will be kept clear of the inner sides of the sections of the bedstead, which is always desirable.

A single notch and supporting-pin would suffice for all the purposes of my invention; but I have herein shown two of each by which greater security and strength is had. From the arrangement shown it is evident that by causing the lower pin to slip into the upper notch or the upper pin into the lower notch I can either lower or raise the side sections relative to the end sections, and thus alter the height of the bedstead from the floor. Inasmuch, however, as the strength of the movable connection or joint is lessened by this manner of adjusting the bedstead, I prefer to effect such adjustment by the means about to be described. Thus I make the supporting-post both detachable and adjustable with reference to the bedstead, and while various means can be resorted to for this purpose

I prefer the simple and effective construction shown in Fig. 3. In said figure the construction of the plate A′ is substantially the same as plate A before described, with the exception that the connecting-web *c′* instead of abutting or fitting closely against the end of the end section 1 of the bedstead is set out from or slightly beyond the end of said section, so as to form a space 19 between the two, and the said connecting-web *c′* is provided with an elongated opening or slot 20, the lower extremity of which is enlarged, as shown at 21. The supporting-post S is also the same in construction as before, or it may be of any other preferred construction, and said post is provided with a suitable interlocking device in the shape of a headed pin 22, which enters the enlarged portion of the slot 20 and passes into the narrow portion of said slot, with the head 23 of the pin engaging the inner surface of the web *c′* on both sides of the slot. The said head is preferably square or rectangular in shape, and the same is wedge-shaped or of gradually-increasing thickness downwardly, as seen at 24. In this way when the pin is forced up into the narrow part of the slot 20 the inner side of its head is made to bind against the inner side of the web *c′*, and thus the greater the force exerted or the greater the weight imposed upon the bedstead the tighter the fastening will become. This construction also renders the parts self-compensating for wear, inasmuch as the pin is gradually forced higher up into the slot as the wear occurs, and by passing the pin 22 all the way through the post the latter is very materially strengthened. I can effect the adjustment of said supporting-post either by forming one pin thereon designed to take into different slots in the web arranged one above the other or else by forming but one slot in said web and providing the post with two pins. The latter is the preferred construction and is the one shown, and it is evident that by inserting either one or the other of said pins in said slot I can raise or lower the bedstead relative to the floor. It will of course be understood that this means of attaching and adjusting the leg or post can be employed independently of the kind of joint or the particular nature of the detachable connection between the sections of the bedstead.

Without limiting myself to the details of construction and arrangement of the several parts shown and described, I claim—

1. In a bedstead, two separable members having a close-fitting joint for uniting the ends thereof independently of the post, and formed with a recess across the outer angle of the joint, and a supporting-post partly received by said recess and constituting a reinforce for such angle.

2. In a bedstead, two separable members having a close-fitting joint for uniting the ends thereof independently of the post, and formed with a recess across the outer angle of the joint, means for supporting the ends of the members vertically relatively to each other, and a supporting-post partly received by said recess and constituting a reinforce for such angle.

3. In a bedstead, two separable members having a close-fitting metallic joint for uniting the ends of the members independently of the post, and formed with a recess across the outer angle of the joint extending the full height of said members, a detachable supporting-post partly received by said recess for reinforcing such angle, and means for adjusting the members vertically with respect to the post.

4. In a bedstead, two separable members having a close-fitting joint for uniting the ends of the members independently of the post, and formed with a curved recess across the outer angle of the joint extending the full height of said members, and a tubular metallic supporting-post partly received by said recess and forming a reinforce for such angle.

5. In a bedstead, two members having a close-fitting metallic joint provided with means for detaching the members one from the other, and formed with a vertical curved recess across the outer angle of the joint, and a detachable supporting-post partly received by said recess, substantially as described.

6. In a bedstead, two separable members having a close-fitting metallic joint for uniting the ends of the members independently of the post, the said joint being constituted in part of a plate secured to one of the members and formed with a recessed portion at the outer angle of the joint, and a supporting-post engaging said portion and partly received thereby to reinforce such angle.

7. In a bedstead, two separable members having a close-fitting joint for uniting the ends of the members independently of the post, the said joint being constituted in part of a curved or recessed plate arranged across the outer angle of the joint and setting out from one of the members to form a space behind the plate, said plate having a vertical slot enlarged at its lower end, and a supporting-post partly received by said recess and provided with means for entering said slot and engaging the inner surface of the plate.

8. In a bedstead, two separable members having a close-fitting joint at the ends thereof, the same being constituted of a plate attached to one member, and provided with a right-angled tenon having a projection or pin thereon, and another plate attached to the other member, and forming therewith a mortise to receive said tenon, the said second plate having at the edge thereof a curved notch to receive the pin, and an overhanging tapering portion adapted to fit closely between said pin and the adjacent side of the plate of the first member, substantially as described.

9. In a bedstead, two separable members having a tight-fitting joint at the ends of the members, the same being formed of a tenon-plate secured to one member and having a

stud or pin projecting therefrom, and a second plate secured to the other member so as to leave a mortise for the reception of the tenon-plate, said second plate having an open-ended curved or angular slot to receive the stud or pin on the tenon-plate, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM S. PLUMMER.

Witnesses:
WILLIAM S. SEYMOUR,
L. E. BARNES.