(No Model.)

E. T. McKAIG.

METAL BEDSTEAD.

No. 574,560. Patented Jan. 5, 1897.

Fig. 4.

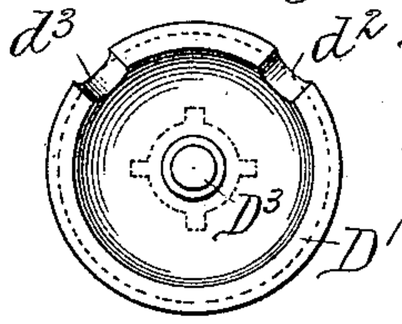

Fig. 1.

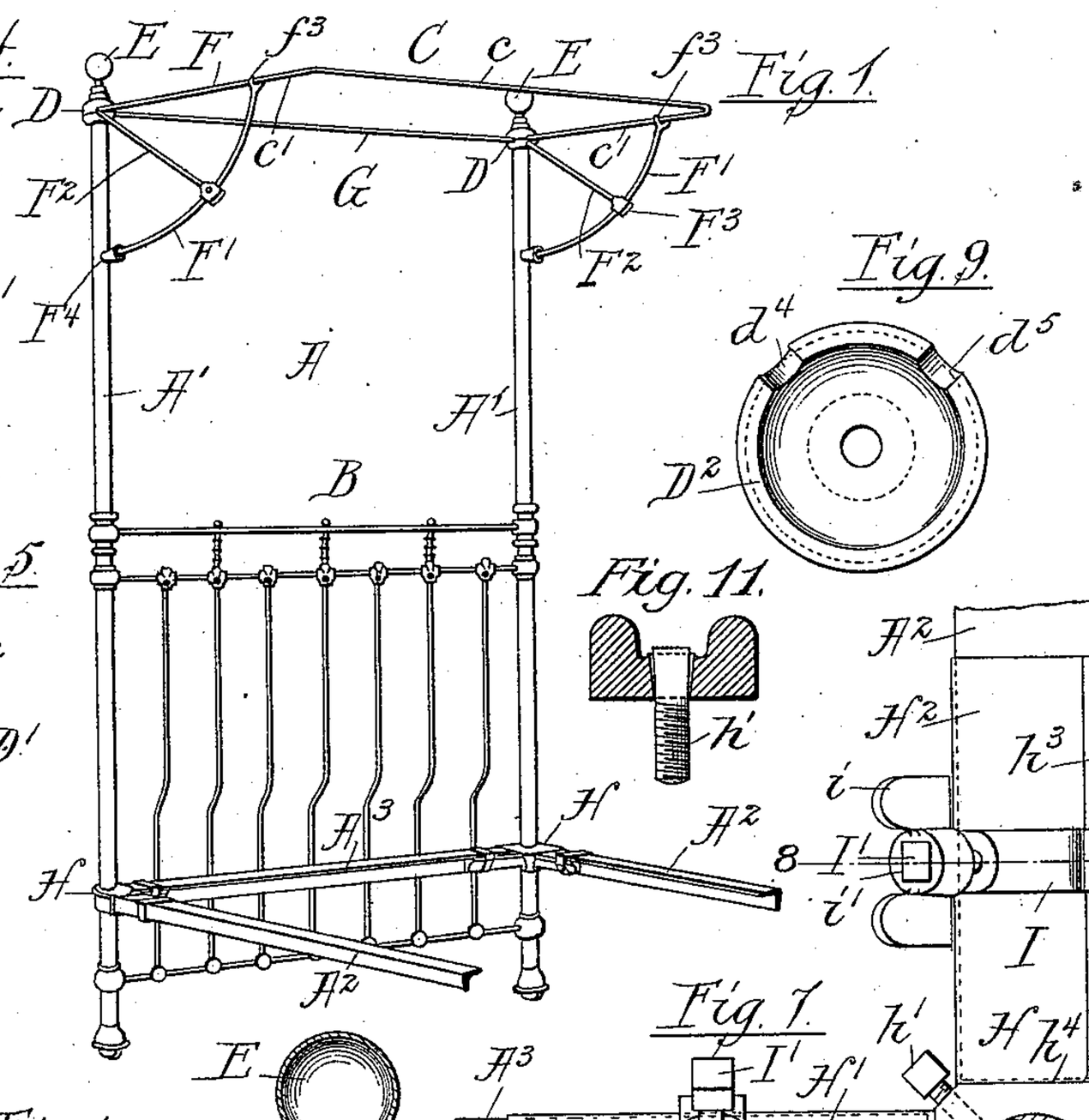

Fig. 9.

Fig. 5.

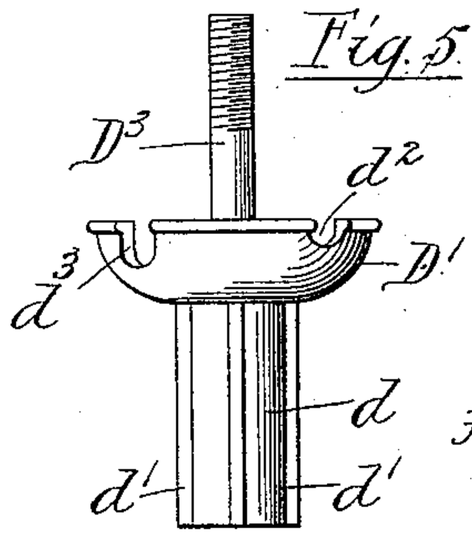

Fig. 11.

Fig. 2.

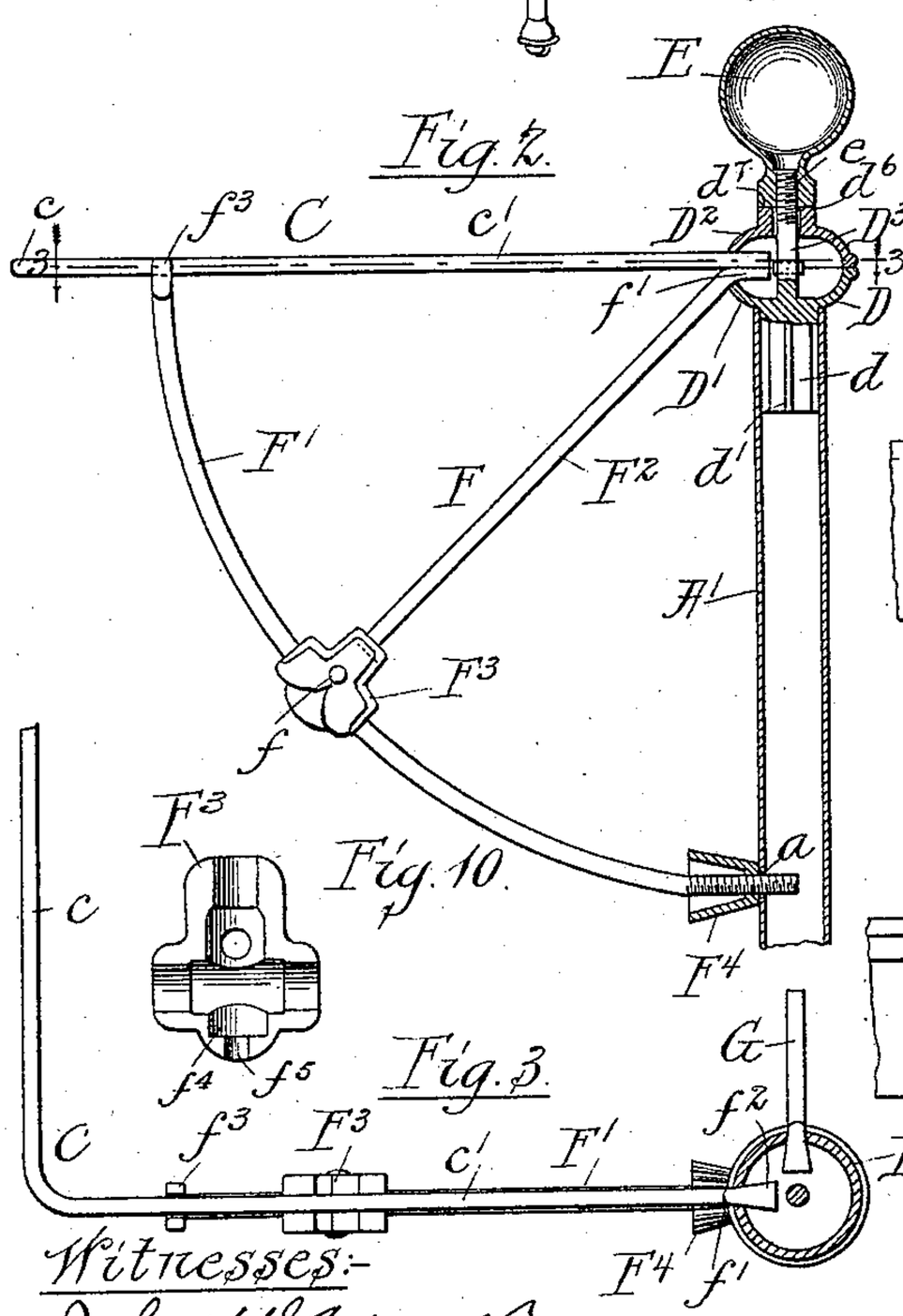

Fig. 10.

Fig. 3.

Fig. 6.

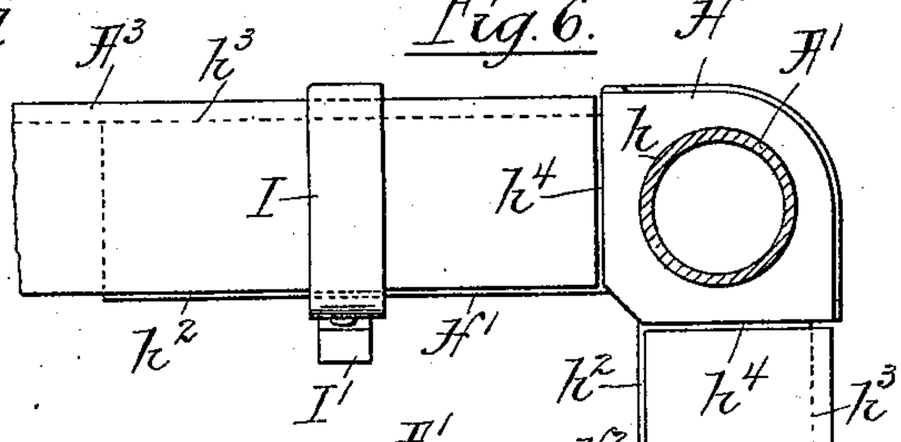

Fig. 8.

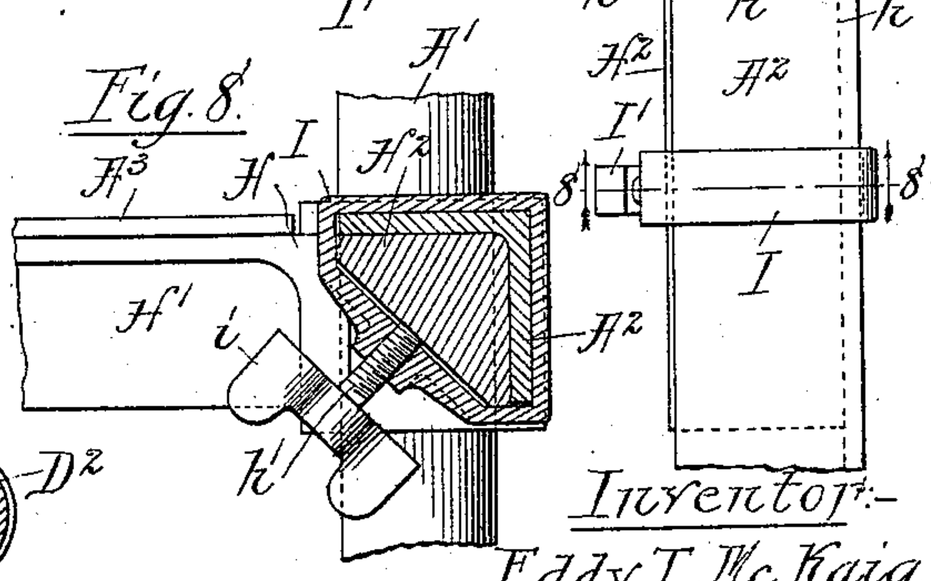

Fig. 7.

Witnesses:-
John W. Adams.
L. Clinton Hamelink

Inventor:-
Eddy T. McKaig.
by:- Dayton, Poole & Brown
his Att'ys.

UNITED STATES PATENT OFFICE.

EDDY T. McKAIG, OF CHICAGO, ILLINOIS, ASSIGNOR OF TWO-THIRDS TO E. C. KADOW AND S. M. LANE, OF SAME PLACE.

METAL BEDSTEAD.

SPECIFICATION forming part of Letters Patent No. 574,560, dated January 5, 1897.

Application filed October 12, 1895. Serial No. 565,510. (No model.)

To all whom it may concern:

Be it known that I, EDDY T. McKAIG, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Metal Bedsteads; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in metal bedsteads; and the object of the invention is to provide improvements in the construction and arrangement of the various parts thereof, whereby the cost of manufacture is reduced, the assemblage and taking apart of the several members greatly facilitated, provision made for adjustment necessary to compensate for irregularities incident to manufacture or otherwise, and the strength and rigidity of the article as a whole increased, while at the same time its appearance is greatly enhanced.

The invention consists in the matters hereinafter described, and more particularly pointed out in the appended claims, and will be readily understood, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the head end of a bedstead constructed in accordance with my invention. Fig. 2 is an axial section of the upper part of one of the head-posts, taken in the same vertical plane with the bracket-support of the canopy and showing the latter in side elevation. Fig. 3 is a horizontal section taken on the line 3 3 of Fig. 2, looking downwardly. Figs. 4 and 5 are plan and side elevations, respectively, of the semispherical casting forming the lower half of the socket, by means of which the upper angle of the canopy-bracket is connected to the corner-posts. Figs. 6 and 7 are top and bottom plan views, respectively, showing the form of connection of the side and end rails with the corner-posts, the latter being shown in horizontal section. Fig. 8 is a sectional detail taken on the line 8 8 of Fig. 7. Fig. 9 is a side elevation of the semispherical casting forming the upper half of the socket, by means of which the bracket and canopy-rod are connected with the corner-post. Fig. 10 is a detail inner face view of the clip or union used for uniting various parts of the bedstead.

For convenience in illustration the head end only of the bedstead is herein shown, it being understood that the connections of the side and end rails with the foot-posts are identical with those shown and described in connection with the head-posts, and that the particular construction of said foot end of the bedstead in other respects is immaterial.

Referring to said drawings, A designates as a whole the head end of a bedstead, comprising corner-posts A′ A′, side rails A^2 A^2, and a head-rail A^3, attached to said corner-posts, the usual grillework or series of bars or rods extending between said corner-posts designated as a whole by B and a canopy-top indicated as a whole by C.

The corner-posts A′ are of tubular metal and may be either of plain cylindrical form or ornamented, as shown herein, or otherwise, the grillework being connected therewith in the usual manner. The side and end rails A^2 A^2 and A^3 are constructed of angle-iron, one flange thereof being arranged in a horizontal plane with its edge projecting inwardly and the other flange extending vertically downward and forming the outer side of the rail. The side rails are rigidly but removably connected with the corner-posts A′ A′ by means of a novel form of bracket connection hereinafter described in detail and made the subject of claims.

The canopy-top C, mounted upon the upper parts of the posts A′, is constructed and arranged as follows: Upon the upper open end of each head-post A′ is secured a hollow metal socket D, preferably, and as herein shown, of approximately spherical form and of larger diameter than the exterior diameter of the posts A′. The socket D is composed of two main parts or members D′ D^2, made to separate in a horizontal plane, the lower part D′ being conveniently secured upon the upper end of the post by means of an integral stud or shank *d*, which is inserted and fits closely within the hollow upper end of said post. For the purpose of economizing in material and to facilitate dressing down in case it is necessary to remove irregularities produced in casting, said shank *d* is preferably

made of less diameter than the interior of the tubular posts and is provided with a plurality of radially-projecting webs or flanges d', the outer edges of which engage the interior wall of said posts and produce the required close fit.

D^3 designates a vertical stud which extends upwardly from the center of the lower member D′ of the socket, said stud being preferably constructed of wrought or rod metal cast in, and is of sufficient length to extend entirely through the socket and project at its upper end above the same, which upper end is screw-threaded to receive a retaining device hereinafter referred to. In the upper margin of the lower part and arranged at an angular distance of ninety degrees apart are two notches d^2 d^3, the latter being approximately semicircular, while the other, d^2, is considerably deeper and also provided with a rounded bottom, as shown clearly in Fig. 5. The upper half D^2 of the socket is substantially like the lower part D′ in its general form, being provided with similar notches d^4 d^5, which register with those of said lower part when the members are properly assembled, both of the notches of the upper member, however, being of equal depth. At its upper side the member D^2 is provided with a central hub or cylindrical boss d^6, which is centrally apertured for the reception of the upper end of the stud D^3. The upper end of said boss d^6 terminates in a flat annular surface or seat d^7.

E designates an ornamental knob provided with a screw-threaded socket e, which is adapted to engage the upper end of the stud D^3 and to contact at its lower end with the annular shoulder d^7, thereby clamping the two members of the socket firmly together, while at the same time the knob forms a desirable finish for the top of the post.

F designates as a whole a segmental-shaped bracket comprising a curved brace-rod F′, an obliquely-depending bracket-arm F^2, and a clip or union F^3, which serves to rigidly unite said rod and arm. The clip F^3 is composed of two castings, preferably of ornamental form, having flat meeting faces, and provided in said meeting faces with semicircular grooves arranged in T relation or at right angles to each other and adapted to receive the brace-rod F′ and bracket-arm F^2. Said clip members are herein shown as secured together by means of a rivet f. In order that said clips F^3 may also be employed for securing parts of the grillework together, semicylindrical recesses f^4 f^5, forming, as shown in Fig. 1, when the two parts are together a socket for the reception of a bolt-head, are formed in the top side of the casting or in alinement with the longitudinally-arranged groove thereof. Obviously the external form of the clip may be varied both in contour and ornamentation. The recess f^4 being of larger diameter than the recess f^5, suitable shoulders are thus formed adapted for engagement with the head of the bolt.

The upper end of the arm F^2 is bent to form a horizontally-arranged portion f', which enters the socket D and is arranged to rest within the lower part of the notch d^2 thereof. As a convenient means for retaining the end of said arm within the socket and at the same time providing for a slight vertical pivotal movement thereof its end portion within the socket is flattened, as at f^2, so as to expand it laterally into a fan or wedge shape, thereby preventing its withdrawal when the socket members are clamped together, but permitting it to be lifted out freely when the upper part D^2 is removed.

The lower end of the curved brace-rod F is screw-threaded and provided with a bell-shaped adjusting-sleeve F^4 threaded therein. The threaded end of said curved brace-rod is adapted to enter and fit loosely within the aperture a, formed in the corner-post A′, the smaller outer end of the bell-shaped sleeve forming an annular shoulder, which serves to limit the entrance of said brace-rod within the corner-post. The upper end of the supporting-rod is provided with a fork within which rests the horizontally-arranged canopy-frame. Said canopy-frame, as herein shown, comprises a front rod c and end rods c' c', arranged to extend at right angles to said front rod, said rods c' c' being preferably and herein shown made integral. The free ends of the end rods c' are inserted in the sockets B and occupy the upper portion of the same apertures with the ends of the bracket-arms F′, being also similarly flattened to retain them therein.

G designates a cross-rod extending between the corner-posts A′, having its respective ends engaged with the sockets D and retained therein by being flattened and inserted in the apertures formed by the notches d^3 d^4 therein.

It will be obvious from the foregoing description that the parts, when constructed and arranged as described, form a rigid canopy-frame which may, however, be adjusted to raise or lower the canopy-rod C′ by simply turning the bell-shaped sleeve in one direction or the other upon the brace-rod F′. Said bell-shaped sleeve, while being of ornamental appearance in its surface, also conceals the threaded portion of the brace-rod F′ exterior to the corner-post.

Next describing the attachments in detail for connecting the side and end rails with the corner-posts, H designates as a whole a bracket provided with integral arms H′ H^2, arranged at right angles to each other and provided also with a suitable post-aperture h in its body portion at the juncture of said arms adapted to receive the corner-post A′. The bracket H is secured upon the post A′ at a desired height by any suitable means, preferably by means of a set-screw h', tapped through the inner side of the bracket and impinging against the body of the post at its inner end.

The bracket-arms H′ H^2 are approximately of a right-angled triangular form in cross-section, as indicated clearly in Figs. 8 and 9,

and arranged with their right-angled surfaces h^2 h^3 in horizontal and vertical planes, respectively, so as to receive thereon the ends of the angle-iron rails A^2 A^3. Shoulders h^4 are formed at the juncture of the bracket-arms H′ H^2 with the body of the bracket against which the ends of said rails abut. As a novel and improved form of connection for securing said rails upon the bracket-arms H′ H^2, I have shown in Figs. 6, 7, and 8 a clamping-ring I, of proper size and conformation to encircle and fit closely upon the bracket-arm and the end of the rail placed thereon. Said clamping-ring I is provided with a set-screw I′, inserted in a suitably-threaded aperture formed in the inner side of said ring and arranged to impinge against the inner surface of the bracket-arm, thereby serving to force the latter into the angle of the rail and clamping said parts firmly together. As an improvement in the construction of said set-screw I provide an ordinary square-headed forged set-screw I′ with a removable cast thumb-nut i, having a rectangular socket aperture i', adapted to receive the square head of said screw, but made slightly tapering toward its inner end, so as to prevent said set-screw head from passing entirely through the socket, the object being to prevent the thumb-nut from dropping off and becoming lost when the set-screw is in use, while at the same time permitting its ready removal after the set-screw has been disconnected from the ring.

From the foregoing description it will be obvious that I have described a bedstead the several parts of which may be assembled or taken apart with great facility, and which several parts, owing to their simplicity and peculiar conformation, may be manufactured at a minimum cost. At the same time the structure when assembled, while apparently of light and airy construction and therefore of graceful appearance, is nevertheless extremely strong and rigid.

The construction by means of which the canopy-frame is rendered adjustable is a feature of importance, inasmuch as it is found difficult to prevent more or less irregularity in manufacturing and also because such frames are liable to sag or become more or less distorted in use.

I claim as my invention—

1. The combination with the posts of a metal bedstead, of a canopy-bracket comprising a curved brace-bar adjustably connected at one end with the bed-post and provided at its other end with means for engaging and supporting a canopy-rod and a bracket-arm rigidly connected at one end with the central portion of the curved brace-bar and provided at its other end with an expanded portion and a socket carried by said post with which said expanded portion is engaged, substantially as set forth.

2. The combination with the post of a metal bedstead, of a canopy-bracket comprising a curved brace-bar adjustably connected at one end with the body of the post and provided at its other end with a fork, a hollow metal socket carried by said post and a bracket-arm rigidly connected at one end with the central portion of the curved brace-bar and inserted at its other end within said hollow metal socket, the end portion of the bracket-arm within said hollow metal socket being flattened and expanded laterally so as to prevent its withdrawal therefrom, substantially as set forth.

3. A hollow shell-socket for securing an attachment to the post of a bedstead comprising upper and lower sections separable in a horizontal plane, the lower section being provided with a shank adapted for insertion in the hollow upper end of the post, a bolt for securing said sections together and an aperture in the shell at the line of separation of the parts thereof, substantially as set forth.

4. The combination with a bedstead-post, of a hollow shell-socket for securing an attachment to the post comprising upper and lower sections made separable, a shank on one of said sections for insertion in the post, a stud rigidly connected with one section and extending through the other, and an aperture in the shell at the line of separation of the parts, substantially as set forth.

5. The combination with a bedstead-post of a hollow shell-socket for securing an attachment to the post comprising upper and lower sections made separable, a shank on one of said sections for insertion in the post, a stud rigidly connected with one of the sections and extending through the other, an ornamental retaining-nut engaging with the end of said stud, and an aperture in the shell at the line of separation of the parts, substantially as set forth.

6. The combination with the posts of a metal bedstead of canopy-brackets each comprising a curved brace-bar, screw-threaded at one end, a bell-shaped adjusting-sleeve engaging with said screw-threaded portion for adjustably connecting said brace-bar with the bed-post, a fork formed upon the other end of said brace-bar, a hollow metal socket carried by the bed-post and a bracket-arm rigidly connected at one end to the central portion of the curved brace-bar and inserted at its other end within an aperture formed in said hollow metal socket carried by the bed-post, the end portion of the bracket-arm within said hollow metal socket being flattened and expanded laterally so as to prevent its withdrawal therefrom, substantially as set forth.

7. The combination with the posts of a metal bedstead of canopy-brackets each comprising a curved brace-bar, screw-threaded at one end, a bell-shaped adjusting-sleeve engaging with said screw-threaded portion for adjustably connecting said brace-bar with the bed-post, a fork formed upon the other end of

said brace-bar, a hollow metal socket carried by the bed-post, a bracket-arm rigidly connected at one end to the central portion of the curved brace-bar and inserted at its other end within an aperture formed in said hollow metal socket carried by the bed-post, the end portion of the bracket-arm within said hollow metal socket being flattened and expanded laterally so as to prevent its withdrawal therefrom, and a canopy-rod having the form of a horizontally-arranged rectangular loop, the end portions thereof being engaged with said hollow sockets and its intermediate portions supported by the outer ends of the brackets, substantially as set forth.

8. The combination with the posts of a metal bedstead of canopy-brackets each comprising a curved brace-bar screw-threaded at one end, a bell-shaped adjusting-sleeve engaging with said screw-threaded portion for adjustably connecting said brace-bar with the bed-post, a fork formed upon the other end of said brace-bar, a hollow metal socket carried by the bed-post, a bracket-arm rigidly connected at one end to the central portion of the curved brace-bar and inserted at its other end within an aperture formed in said hollow metal socket carried by the bed-post, the end portion of the bracket-arm within said hollow metal socket being flattened and expanded laterally so as to prevent its withdrawal therefrom, a canopy-rod having the form of a horizontally-arranged rectangular loop, the end portions thereof being engaged with said hollow sockets and its intermediate portions supported by the outer ends of the brackets, and a cross-bar connecting said posts arranged in the same plane with said canopy-rod, substantially as set forth.

9. The combination with the corner-post of a bedstead, of a bracket for attaching the side and end rails thereto, comprising integral rail-supporting arms extending at right angles to each other, a vertical post-aperture extending through the body of said bracket at the juncture of the arms, means for securing the bracket in position upon the post, and means for securing the rails upon said arms, comprising a clamping-ring provided at one side with a set-screw arranged to impinge against one of the encircled parts to clamp the same together, substantially as set forth.

10. The combination with the corner-post of a bedstead, of a bracket for attaching the rails thereto comprising integral rail-supporting arms extending at right angles to each other, the said rails having the form of a right-angled triangle in cross-section, the rectangular sides of which are arranged in horizontal and vertical planes, respectively, a vertical post-aperture extending through the body of the bracket at the juncture of the arms, means for securing the bracket in position upon the post and means for securing angle-iron rails upon said rail-supporting arms comprising a clamp-ring arranged to encircle both rail and bracket and provided with a set-screw at one side of said ring arranged to impinge against the bracket-arm whereby the latter is forced into the angle of the rail, substantially as set forth.

11. The combination with a set-screw having an outwardly-flaring pyramidal head, of a removable cast-metal thumb-nut provided with a tapered rectangular socket adapted to receive the head of the set-screw, said socket being made tapering toward its inner end, substantially as set forth.

12. A clip for securing the parts of a metal bedstead together in fixed relation, comprising two metal castings having flat meeting faces, each provided in its face with grooves semicircular in cross-section and arranged to register with each other and extending in crossed relation so as to form sockets for the reception of cylindrical bodies, and a rivet or equivalent securing said parts together, each of said sockets being enlarged within the body of the casting to form a recess of greater diameter than said groove whereby a shoulder is formed adapted to receive and hold the head of a bolt or the like, substantially as set forth.

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two witnesses, this 24th day of August, A. D. 1895.

EDDY T. McKAIG.

Witnesses:
TAYLOR E. BROWN,
WILLIAM L. HALL.