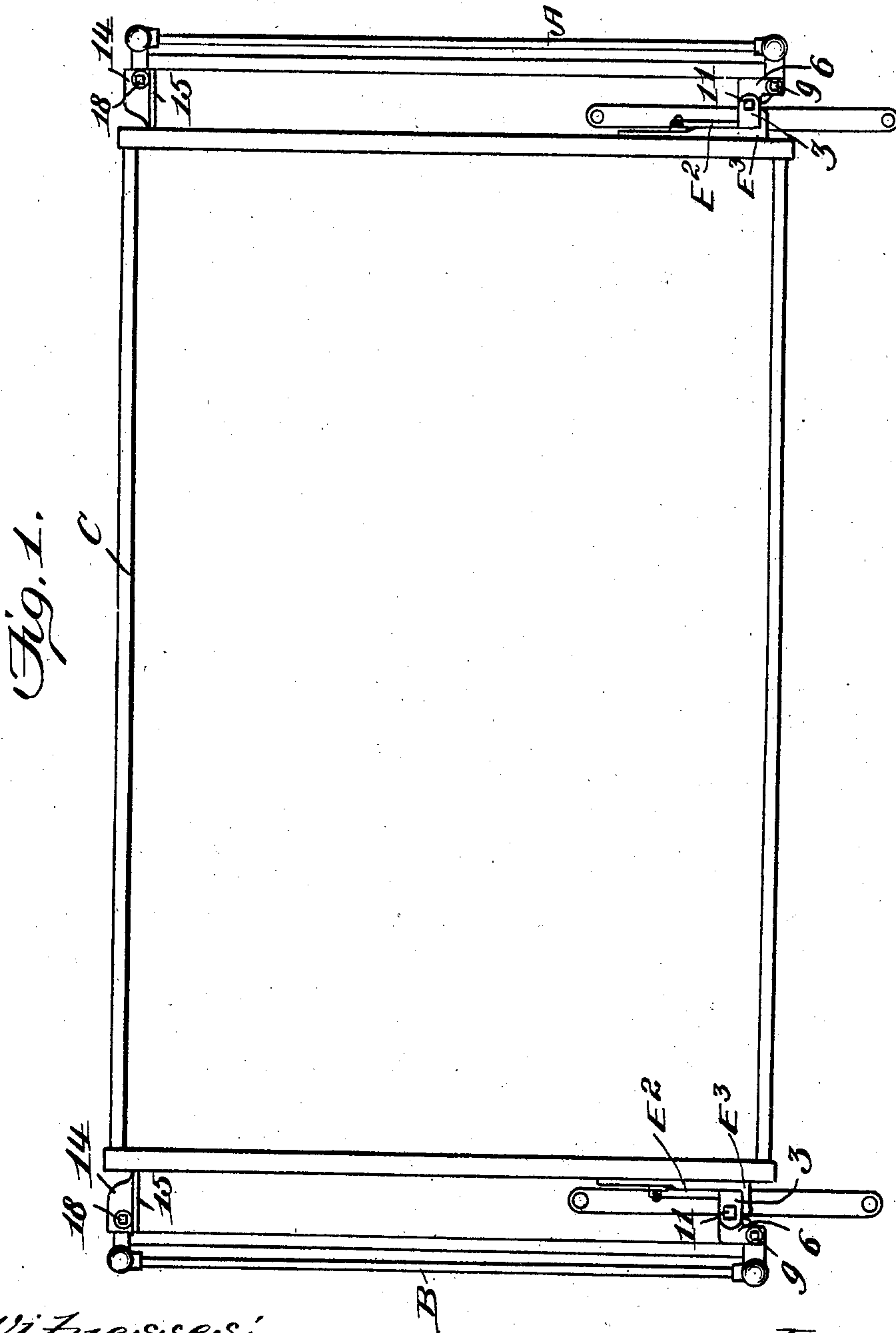


No. 828,185.

PATENTED AUG. 7, 1906.

C. P. BROWN.
ATTACHMENT FOR BEDSTEADS.
APPLICATION FILED DEC. 22, 1905.

3 SHEETS—SHEET 1.



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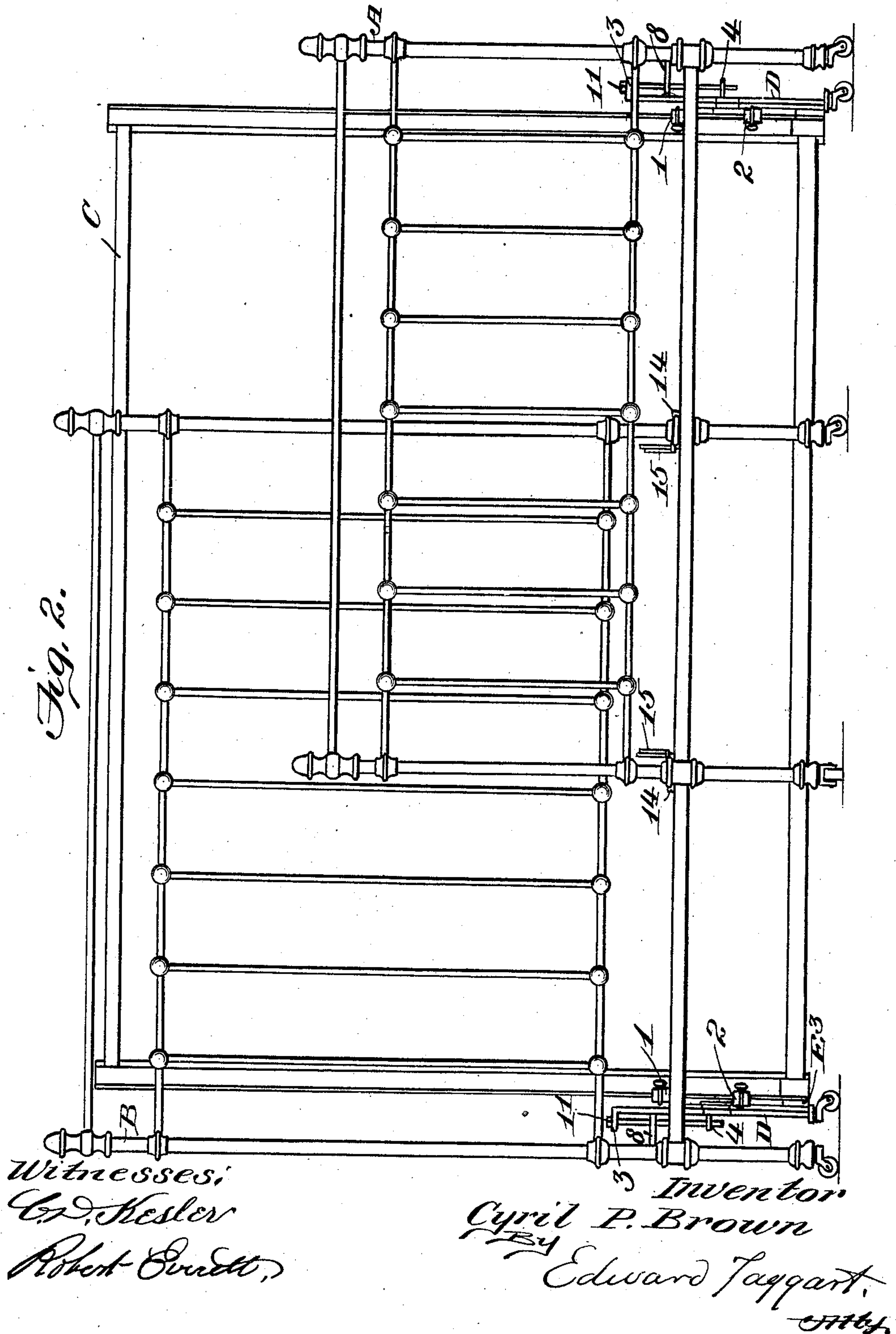
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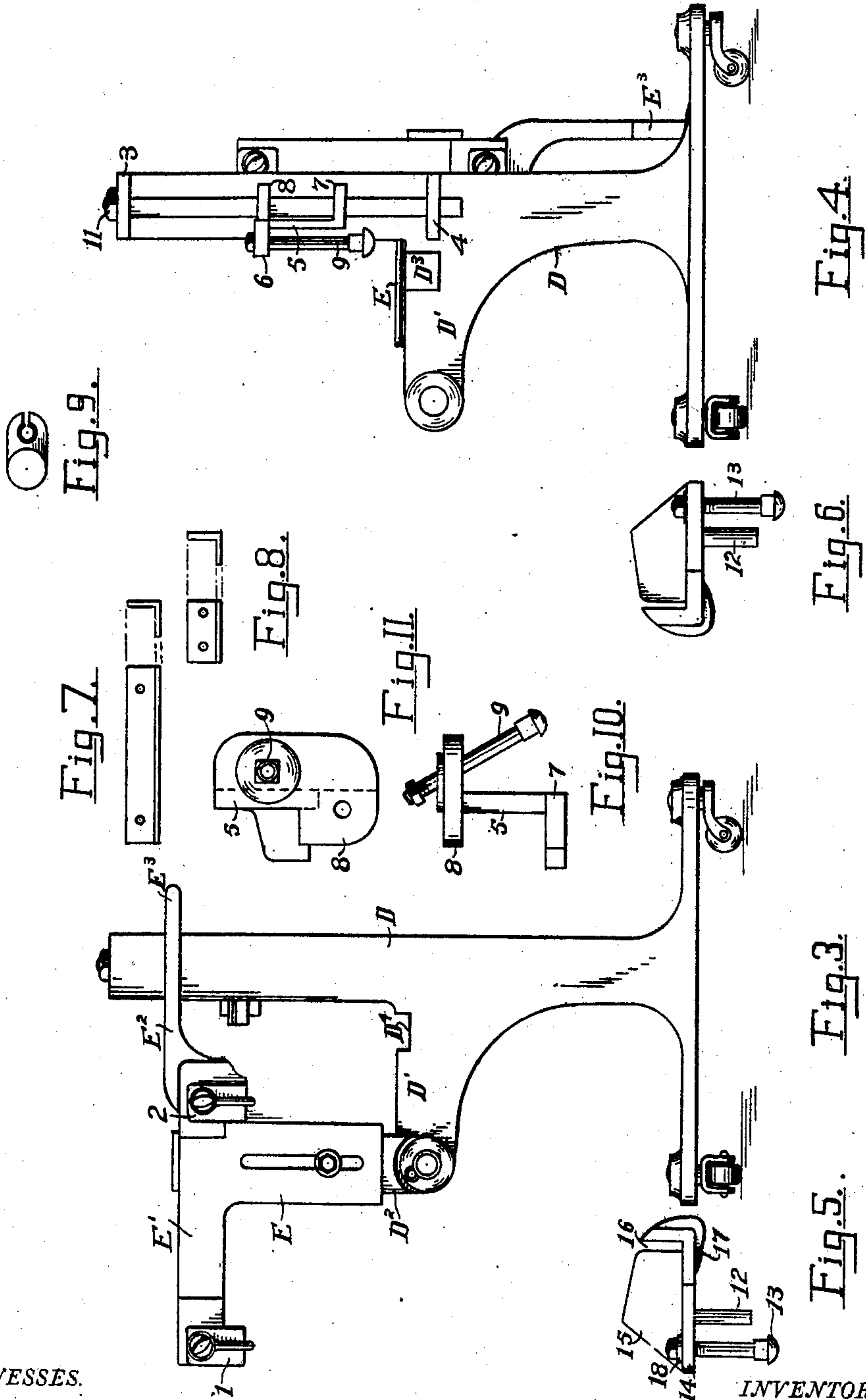
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3 SHEETS—SHEET 3.



WITNESSES.

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UNITED STATES PATENT OFFICE.

CYRIL PECK BROWN, OF SPRING LAKE, MICHIGAN, ASSIGNOR OF ONE-HALF TO JOHN FRANKLIN JOHNSTON, OF GRAND HAVEN, MICHIGAN.

ATTACHMENT FOR BEDSTEADS.

No 828,185.

Specification of Letters Patent.

Patented Aug. 7, 1906.

Application filed December 22, 1905. Serial No. 293,019.

To all whom it may concern:

Be it known that I, CYRIL PECK BROWN, a citizen of the United States, residing at Spring Lake, in the county of Ottawa and State of Michigan, have invented new and useful Improvements in Attachments for Bedsteads, of which the following is a specification.

My invention relates to a new and useful attachment for bedsteads; and its object is to permit the ordinary standard metallic bedstead and its contained spring or mattress-frame, in which when set up the parts have permanent and rigid relation to each other, to be transformed into a folding bedstead, and to accomplish this transformation in an especially simple, efficient, and economical manner. This object I accomplish by the mechanism shown in the accompanying drawings.

In the drawings, Figure 1 is a top plan of a metallic bedstead and mattress-frame having my invention applied in connection therewith. Fig. 2 is a side elevation of the same device when the parts have been folded as designed, the end sections being the head and foot pieces, having been swung into a line parallel to the folded-up mattress-frame. Fig. 3 is a side elevation of the folding attachment, the side of the same being parallel to the head or foot piece to which it is attached, and this figure shows the device in folded-down position and shows the side of the same opposite to its head or foot piece. Fig. 4 is a side elevation of the same folding device, showing the same in its folded-up position and showing the side of the same adjacent to its head or foot piece. Figs. 5 and 6 show the right and left forms of attachments to the head and foot pieces, respectively, designed to furnish receiving-sockets for holding and supporting the mattress or spring frame when it is in folded-down position. Figs. 7 and 8 show forms of attachment designed for application to the wooden frames of mattresses when such form of frame is used. Fig. 9 is a detail of a portion of a vertical post of the standard metallic bed, showing the standard form of permanent lugs attached thereto. Fig. 10 is a detail side view, and Fig. 11 a top plan view, of the lug which I hereinafter call the "accessory turning-lug."

The ordinary standard metallic bedstead common upon the market and which practically all manufacturers are making has head and foot pieces, the posts or standards of which are at a suitable distance above the floor provided with projecting lugs of form such as is shown in detail in Fig. 9, designed to receive and support the bed-rails connecting the head and foot pieces, and of form suitable to receive a vertical bolt. The regular standard mattress or spring-frames upon the market are provided at head and foot with transverse bars, either of wood or metal. If of wood, they are flat and of sufficient width to give the desired rigidity and strength. If of metal, they are of angle-iron, having for greater strength a downwardly-projecting flange. It is these common well-known standard forms of the units which make up a complete metallic bedstead that I design to unite into a simple and efficient folding bedstead.

In the drawings, A represents the foot-section corresponding to the foot-board of a wooden bedstead.

B represents the head-section, which is necessarily of the same width, but is usually, though not necessarily, higher than the foot-section.

C represents the mattress or spring-frame which forms the support of the bed itself. The side bars or rails of this mattress or spring-frame which connect the transverse bars at the head and foot of the same are in the standard frame on the market sufficiently strong and rigid, so that they may operate as the sole connection between the head and the foot sections and entirely take the place of the ordinary bed-rail or side connecting-bar, with which in my invention I entirely dispense.

D represents the vertical standard of the folding device. It is of any suitable shape and height; but it should for greatest efficiency be somewhat higher than the highest level at which it may be desired to adjust the bed-frame. This standard D has a laterally-projecting arm D'. This laterally-projecting arm may be of any desired length; but it constitutes the fulcrum or turning-point of the bed-frame and should be projected far enough beyond the inner line of the bed so

that the same will lift and fold up easily. This fulcrum or turning-point should be located at approximately the same distance from the vertical standard D as the distance
 5 which the bed-frame is lifted above the floor, so that when the bed-frame is turned up into vertical position its edge, which then is its lower edge, will be enabled to clear the floor and at the same time will be so far below the
 10 fulcrum or turning-point that the center of gravity will be low enough so that there will be no tendency for the bed to fall back into horizontal position. This construction enables me to get the effect of a counterbalance-
 15 weight upon the inner edge of the bed or in connection with the inner edge of the bed, but at the same time entirely to avoid the expense and awkwardness of such weight and the labor of lifting caused thereby. At the
 20 extremity of this lateral arm D' is pivoted the vertical bar D², and it is so pivoted that this arm D² (shown as vertical in Fig. 3) may be turned down into the horizontal position, so that it will lie alongside of the lateral arm
 25 D'. This arm D² upon the reverse side in Fig. 3, and upon the edge which is the upper edge when in horizontal position carries the right-angled lug D³, the horizontal position of which enters the notch D⁴, engaging there-
 30 with, and the vertical portion of which extends down upon the other side of D' when folded, thus maintaining D² and the parts carried thereby in proper firm rigid relation when the bed is folded up to the standard D'
 35 and its connected parts. To this vertical arm D² is attached the bed-supporting T-frame E. This frame is attached to the arm D² by means of a bolt passing through the arm D² or a threaded stud upon such arm
 40 and passing through a vertical slot in the frame E. This bolt-and-slot connection with any ordinary form of screw-nut used, with the bolt, permits the vertical adjustment of the frame E upon the arm D² to an extent limited
 45 only by the length of the slot, and in this way the height of the bed-frame can be adjusted as desired and to accommodate the position of the supporting-lugs upon the posts of the head and foot frame in the bedstead to which
 50 this invention is to be applied.

The frame E is provided at its top with transverse extensions E' and E². The former provides support for the bed-frame at the point still further from its edge, and the latter, being in approximate sliding contact with
 55 the side of the vertical standard D, acts as a guide when the bed-frame is turned up to its vertical position and at the same time stiffens the device and holds the bed-frame in rigid
 60 position with reference to the standard D as against any lateral strain. These transverse extensions E' and E² are provided with (or perhaps only the extension E' is provided
 65 with) a suitable clip or with suitable clips for detachable connection with the transverse

rail at the head and foot of the bed-frame. I have indicated in Fig. 3 two such clips by Figs. 1 and 2, and I have shown them operated by a suitable thumb-nut. It is evident
 70 that the depending flange of the angle-iron, if the spring-frame is metallic, or the depending flange of the attachment for wooden frames, which I have shown in Fig. 7, will drop down between these clips and the main
 75 body of the arm E' and that when the clips are screwed up the two will be held in rigid connection. The outer end of E² is provided with the hook E³, which when in the position
 80 shown in Fig. 3 passes around and engages the standard D, thus locking the bed-frame against further downward folding, and also by engaging D upon both sides supporting
 85 against lateral strain. If, as is usual, the bedstead-frames are supported on casters, this folding attachment D will be supported on similar casters.

Upon the side of the standard D which is intended to be adjacent to the head or foot frame I provide projecting lugs 3 and 4. I provide also what I call an "accessory turn-
 90 ing-lug," which is included in Fig. 4 and shown in detail in Fig. 10, which is cast or manufactured entirely separate from the standard D and attached parts and consists, essentially, of the vertical web 5, with
 95 lug 6 projecting in one direction and lugs 7 and 8 projecting in the other direction. Lug 6 is drilled with a suitable hole to receive the bolt 9, by which firm and rigid connection is made to the standard-lugs upon the posts at
 100 the head and the foot frames. Lugs 7 and 8 are also drilled with registering holes to receive the bolt 11, which passes through corresponding registering holes in lugs 3 and 4. There is thereby formed a hinged connection
 105 between the standard D and the head or foot frame to which the device is attached. This hinged connection permits a free lateral swing of the head or foot frame upon the standard D as a door swings upon its hinges
 110 and at the same time permits the accessory turning-lug 5 to be adjusted vertically within the limits between the lugs 3 and 4, so that the accessory turning-lug 5 may be accommodated to the vertical position of the per-
 115 manent lugs upon the posts of the head or foot frame. These accessory turning-lugs 5 are provided and are used, as will be apparent, upon the two corner-posts of the bed-frame, which will normally be the inner cor-
 120 ners standing against the wall or which are adjacent to that edge of the bed-frame which is designed to be the lower edge when the same is folded up. In order to make the necessary connection between the head and foot
 125 frame at or near the other or outer edge of the folding bed-frame, I provide two similar accessory lugs, which I call "accessory locking-lugs," (shown in the right and left hand
 130 form in Figs. 5 and 6,) and designed to be at-

5 attached to the two permanent lugs upon the
 two other corner-posts. These accessory
 lugs have the vertical web 12, which, in con-
 nection with the bolt 13, permit their firm and
 rigid attachment to the permanent lugs upon
 the corner-posts. They also have the hori-
 10 zontal frame or bed 14 and the upwardly-
 projecting vertical web 15, provided with the
 vertical slot 16. This vertical slot 16 upon
 at the top receives the depending flange upon
 the angle-iron forming the transverse bar at
 the head or foot of the bed-frame, if of metal
 construction, or a similar depending flange
 upon the attachments to wooden frames.
 15 The slot is of sufficient width and depth to
 make a close fit with the flange, which it re-
 ceives, and, with the shown beveled or sloping
 form of the vertical web, guides the same to
 and holds the same in its exactly proper po-
 20 sition. Upon the lower outer corner of this
 locking-lug I provide a rib or other means of
 the form shown by 17 in Figs. 5 and 6 or
 otherwise so shape this portion of the lug
 that it is approximately triangular in vertical
 25 cross-section and forms a downwardly-pro-
 jecting latch. It is apparent that when the
 frame is folded up and the head and foot sec-
 tions are folded in upon each other this lock-
 ing-lug will be substantially upon the same
 30 level with the cross-bars upon the head and
 foot frames, which cross-bars customarily
 connect and carry the permanent lugs upon
 the posts of these frames. Therefore by
 lifting slightly the head or foot frame, which-
 35 ever is last folded in, this latch 17 will drop
 over and lock upon the cross-bar upon the
 other end section intervening between this
 lug-carrying section and the bed-frame. The
 two end sections will thereby be locked quite
 40 firmly together, and neither one can be un-
 folded until they are lifted out of engage-
 ment. At the same time they are thereby
 locked in position parallel to the folded-up
 bed-frame, and all three parts become one
 45 firm structure held in this folded position and
 capable of being moved about upon casters
 or otherwise, as convenient, without losing
 the parallel relation to each other.

50 The accessory turning-lug (shown in detail
 in Fig. 10) I have constructed with a hori-
 zontal bed or plate drilled for the bolt 9 and car-
 rying an extension in the same plane drilled
 for the bolt 11. This plate has a down-
 55 wardly-projecting vertical web provided
 with another extension parallel to the first
 and also drilled to receive the bolt 11, as
 above described. This vertical web both in
 this accessory turning-lug and in the acces-
 60 sory locking-lug bears against the permanent
 lugs of the posts and, together with the at-
 taching-bolts, makes a very firm and rigid
 connection. I find it convenient also to
 make of oblong shape the holes in the hori-
 zontal plates of these accessory turning and
 65 accessory locking-lugs, through which holes

pass the attaching-bolts. This oblong con-
 struction permits a slight adjustment and
 when employed calls for the use of the washer
 18; but such oblong form is essential only
 where adjustment is necessary.

70 It will be apparent that when in use the
 mattress and bedding may be held in posi-
 tion by any customary means. In the prac-
 tical use of my invention I take the ordinary
 metallic bedstead on the market, removing
 75 the side rails, with which I dispense. I then
 attach to the permanent lugs on the posts the
 two accessory turning-lugs, placing these at
 the corners of the bed, which will be against
 the wall or which will be along the lower edge
 80 when the bed is folded. I then attach at the
 other corners the two accessory locking-lugs.
 I then attach to the two accessory turning-
 lugs the supplemental folding standards D by
 means of the connecting hinge-bolt. To
 85 these folding standards I then attach the bed
 or mattress frame, clamping the flange de-
 pending therefrom in the clamps 1 2. This
 completes the connection between the parts,
 and the bedstead may then be folded or un-
 90 folded, as above described.

Having thus described my invention, what
 I claim to have invented, and desire to secure
 by Letters Patent of the United States, is—

1. An attachment for bedsteads compris- 95
 ing a supplemental supporting-frame inter-
 mediate the end section of the bedstead and
 the bed-frame and detachably connected
 both to the end section and to the bed-frame,
 a hinged connection between such supple- 100
 mental frame and the end section, and a
 hinged connection between such supplemen-
 tal frame and the bed-frame.

2. An attachment for bedsteads compris- 105
 ing a supplemental supporting-frame inter-
 mediate the end section of the bedstead and
 the bed-frame and detachably connected
 both to end section and to bed-frame, and a
 hinged connection between the bed-frame
 and the end section carried by such supple- 110
 mental frame and located at a point approxi-
 mately the same distance within the side
 post of the end section as the elevation of the
 bed-frame from the floor, whereby the bed-
 frame can be folded up with its lower edge 115
 close to the floor.

3. An attachment for bedsteads compris-
 ing a supplemental supporting-frame inter-
 mediate the end section and the bed-frame
 and detachably connected thereto, said sup- 120
 supplemental frame constituting a hinged con-
 nection between the end section and the bed-
 frame, and comprising also a bed-frame re-
 ceiving and supporting device detachably
 connected to the end section.

4. An attachment for bedsteads, compris- 125
 ing a pair of pivoted bed-frame-supporting
 members adapted to be connected with the
 bed-frame and interposed between the ends
 of the bed-frame and the end sections of the 130

bed, a vertical support for said members, and means for hinging the vertical supports to the end sections of the bed.

5 5. An attachment for bedsteads comprising a standard having a laterally-extending arm, a bed-frame-supporting member pivoted to said arm and movable from horizontal to vertical position, and means for hinging the standard to the post of an end section of
10 a bed.

6. An attachment for bedsteads, comprising a standard having a laterally-extending arm, a vertically and adjustable bed-frame-supporting member pivoted to said arm and
15 movable from horizontal to vertical position, and means for hinging the standard to a post of an end section of a bed.

7. An attachment for bedsteads, comprising a standard having a laterally-extending
20 arm provided with a notch, a bed-frame-supporting member pivoted to said arm and having a protuberance adapted to engage in said notch and overlap one face of said arm, and means for hinging the standard to the
25 post of an end section of a bed.

8. An attachment for bedsteads, comprising a standard having a laterally-extending arm provided with a notch, a vertically-adjustable bed-frame-supporting member pivoted to said arm and movable from horizontal
30 to vertical position, said member provided with a protuberance adapted to engage in said notch and overlap one face of said arm when said member is moved to vertical
35 position and said member provided with a hook adapted to overlap the standard when said member is moved to horizontal position, and means for hinging the standard to the
40 post of an end section of a bed.

9. An attachment for bedsteads, comprising a standard having a laterally-extending arm, a bed-frame-supporting member pivoted to said arm and having a pair of adjustable clips for securing the bed-frame thereto,

and means for hinging the standard to the
45 post of an end section of a bed.

10. An attachment for bedsteads, embodying a pair of accessory locking devices, each of said accessory locking devices comprising a bed portion, a vertical web projecting
50 in one direction therefrom and provided with a slot, a vertical web extending in an opposite direction with respect to the direction in which the first-mentioned vertical
web extends, an angularly-disposed rib portion forming a continuation of said bed, and
55 a holdfast device.

11. A folding attachment for bedsteads, comprising a pair of pivoted bed-frame-supporting members connected with the bed-
60 frame and arranged intermediate the ends of the bed-frame and the end sections of the bed, vertical supports for said members, means for hinging the vertical supports to the end sections of the bed and engaging
65 therewith for retaining the end sections and bed-frame together when moved to folded position.

12. A folding attachment for bedsteads, comprising a pair of vertically-adjustable
70 and pivoted bed-frame-supporting members adapted to be connected to the bed-frame and arranged intermediate the ends of the bed-frame and the end sections of the bed, vertical supports for said members, means
75 for hinging the vertical supports to the end sections of the bed, and means carried by the end sections of the bed and engaging therewith for retaining the end sections and bed-frame together when moved to folded position.
80

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CYRIL PECK BROWN.

Witnesses:

A. C. DENISON,
MARY S. LOOKER.