

No. 654,156.

Patented July 24, 1900.

J. T. JOHNSON.
CANOPY FRAME OR SUPPORT.

(Application filed Sept. 15, 1899.)

(No Model.)

Fig. 1.

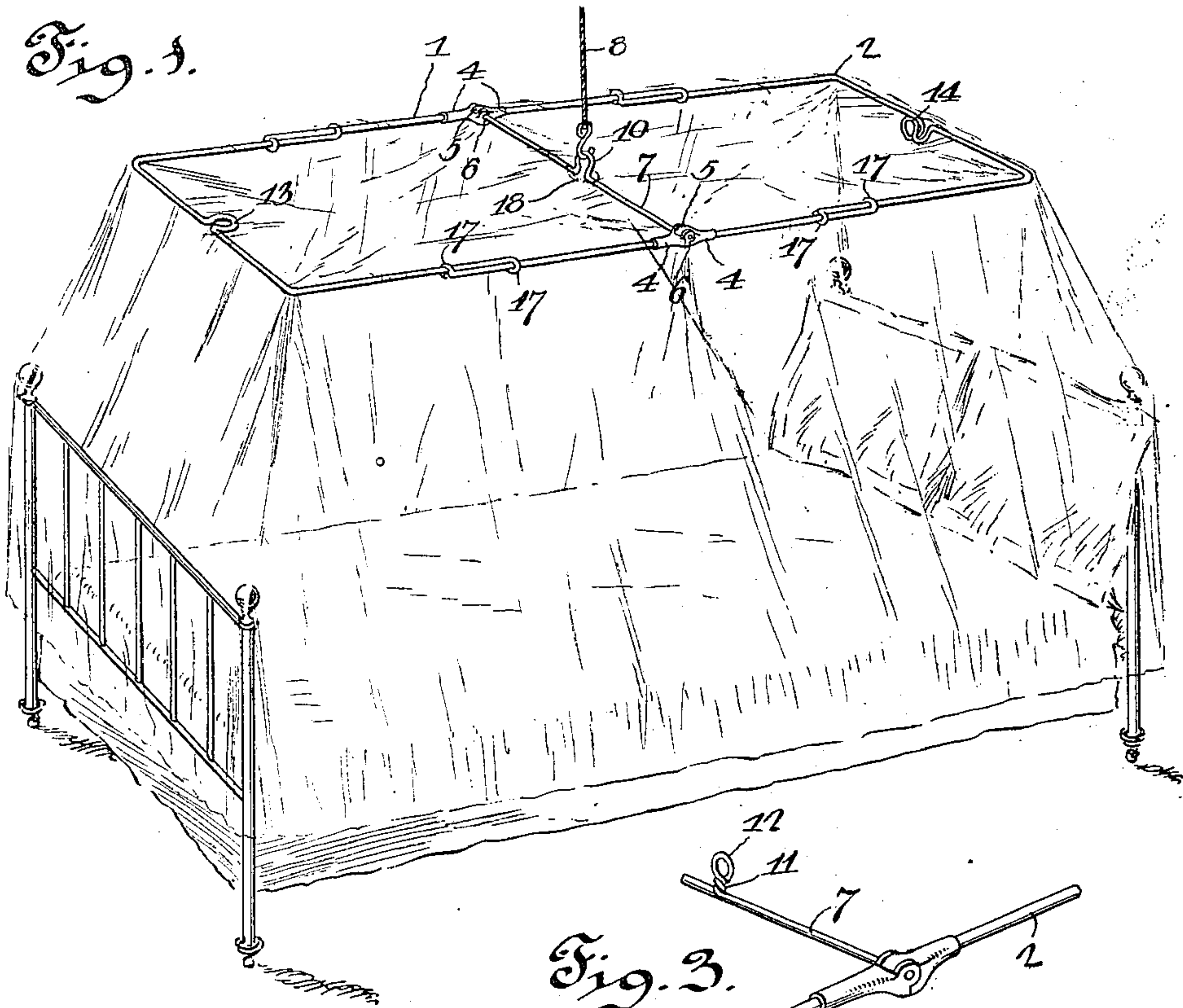


Fig. 3.

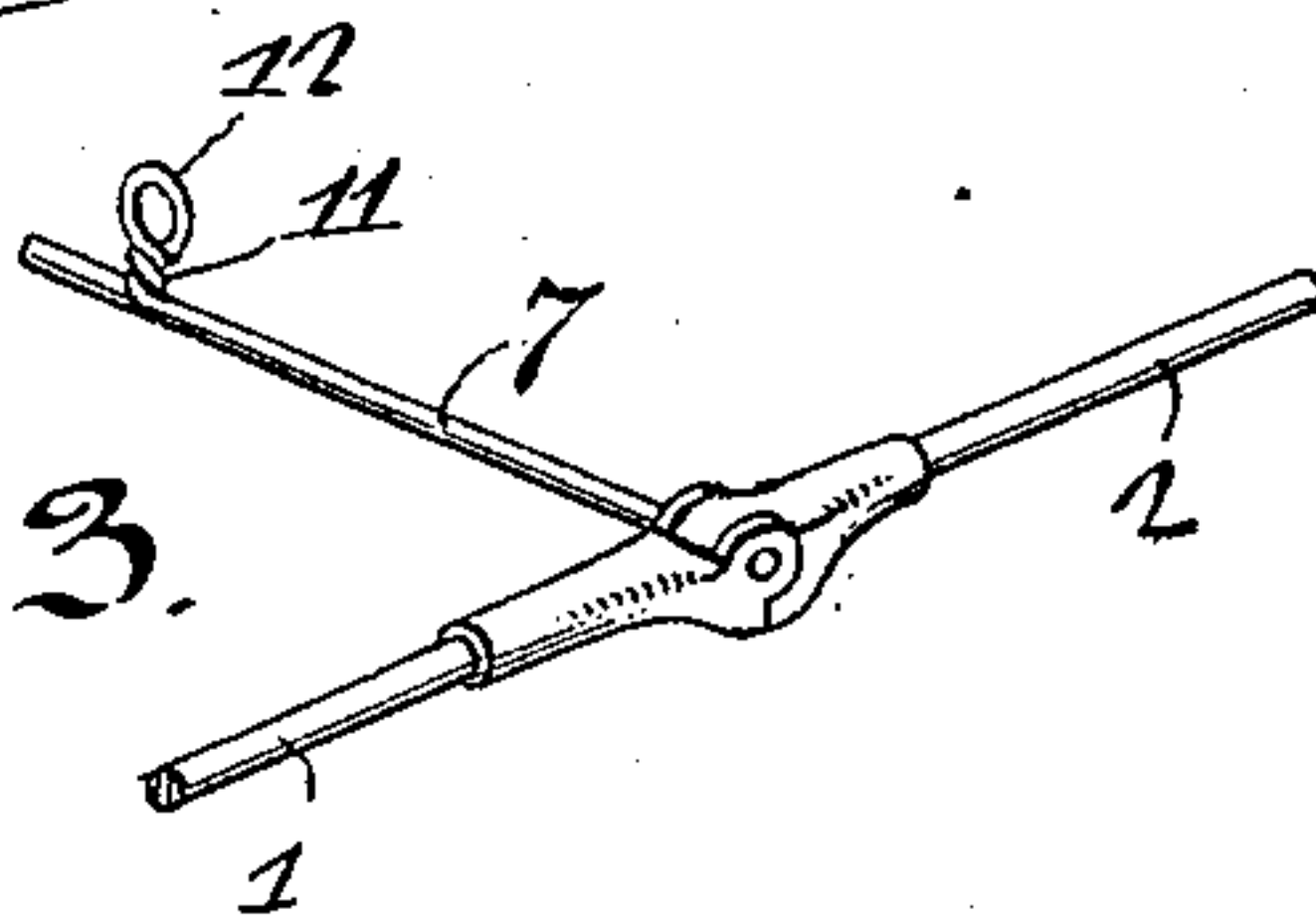


Fig. 4.

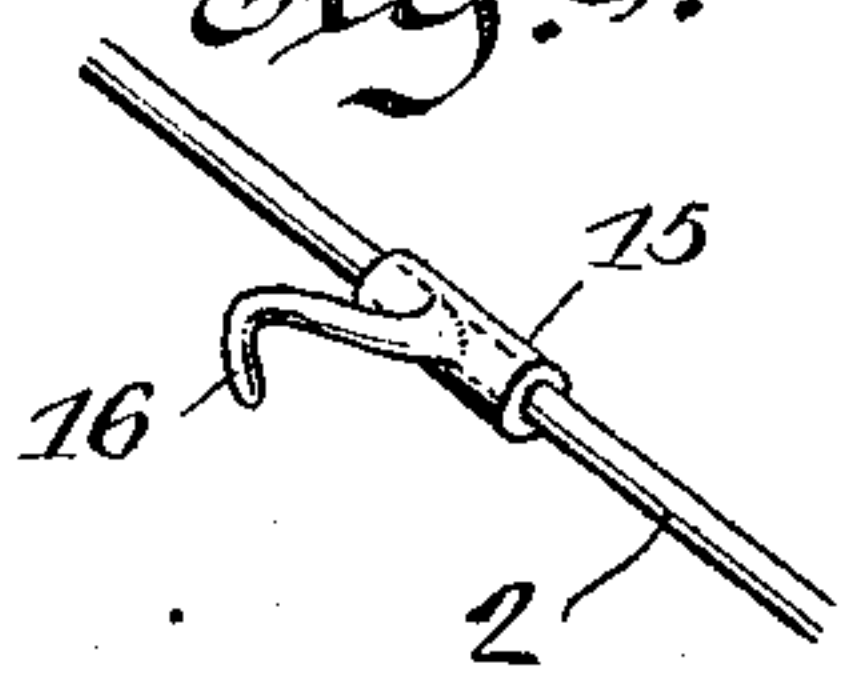


Fig. 2.

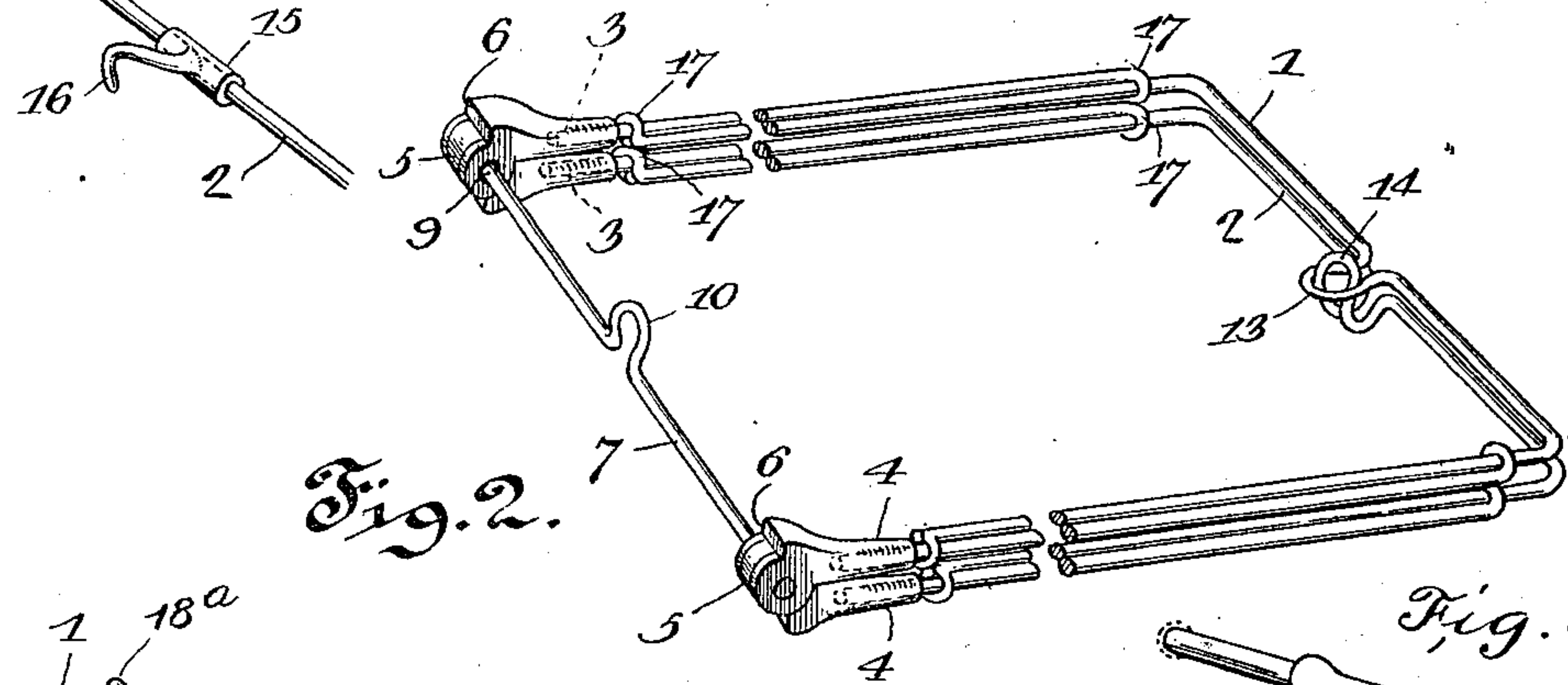


Fig. 5.

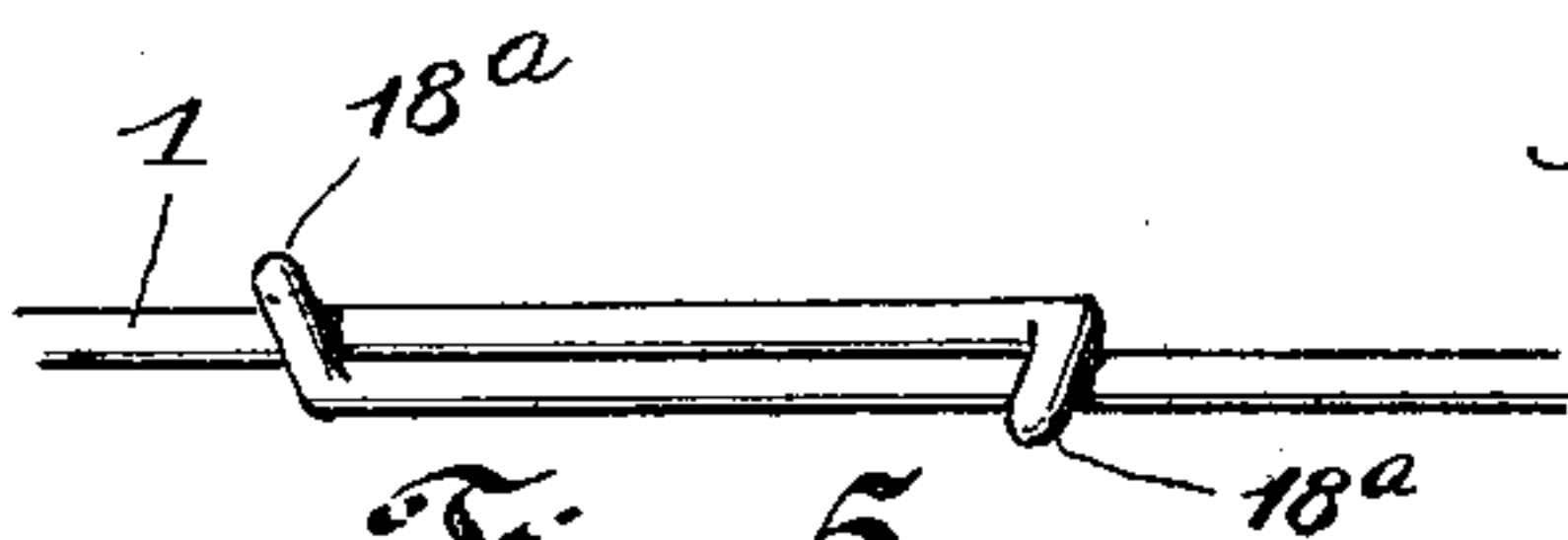


Fig. 5.



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UNITED STATES PATENT OFFICE.

JACOB T. JOHNSON, OF KNOXVILLE, TENNESSEE.

CANOPY FRAME OR SUPPORT.

SPECIFICATION forming part of Letters Patent No. 654,156, dated July 24, 1900.

Application filed September 15, 1899. Serial No. 730,603. (No model.)

To all whom it may concern:

Be it known that I, JACOB T. JOHNSON, a citizen of the United States, residing at Knoxville, in the county of Knox and State of Tennessee, have invented a new and useful Canopy Frame or Support, of which the following is a specification.

This invention relates to canopy frames or supports; and the object of the same is to provide a simple and effective device of this character which is adapted to be folded in compact form when not in use, for convenience in storage and transportation, and capable of being quickly and positively arranged in connection with a canopy or net, and including features of lightness, durability, and strength, and wherein the parts may be readily assembled in the initial manufacture, thus reducing the cost of assemblage and the expense of general production.

The invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 represents a perspective view of a bed having a canopy or net thereover held by a frame or support embodying features of the invention. Fig. 2 is a similar view of the frame or support shown folded. Fig. 3 is a similar view of a portion of a frame or support, showing a slightly-modified feature thereof. Fig. 4 is a similar view of another portion of the frame or support, showing a further modification. Fig. 5 is a detail elevation of a still further modification. Fig. 6 is a detail perspective view of a portion of one end of the pintle-rod.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numerals 1 and 2 designate two sections having their terminals 3 secured in the sockets 4 of the members of stop-hinges 5, one member of each hinge being provided with a pronounced shoulder 6, against which a part of the opposite member is adapted to squarely abut or bear, so as to prevent the opposite sections turning below a horizontal plane when the entire frame or support is arranged in operative position, as shown by Fig. 1. The pintles for the said hinges are formed by the opposite extremities of a transverse rod 7,

which also serves as a brace and as a means of attaching a suspending cord or analogous device 8, which is fastened to an overhead hook or other similar or preferred attaching means. The extremities of the rod 7 have shoulders 9 formed thereon or suitably applied thereto at distances inward from the terminals of the rod approximating the thickness of the parts of the hinges 5, through which the said extremities extend. To prevent the rod 7 from having movement, the terminals thereof are upset or otherwise fastened against the outer faces of one of each set of hinge members, sufficient play of the hinge members being permitted to afford means for regularly opening and closing the sections 1 and 2. From this particular construction it will be observed that the provision of independent pintles is avoided and the necessity of joining the rod 7 to such devices, with the additional cost of manufacture and weakening of the general structure, is obviated. In performing its function as a brace the said rod 7 holds the inner portions of the sections constantly at a predetermined distance apart in a transverse direction and overcomes any tendency toward inward bend or disfiguration. As a means of suspending the entire frame or support, the rod 7 is exceptionally effective in view of its central location relatively to the sections 1 and 2, and as a convenient means of attaching the suspending-cord or analogous device 8 thereto said rod, as shown by Figs. 1 and 2, is bent at an intermediate point to provide an upstanding loop 10, which by its open construction will allow the rod to have a slight resiliency, which in a measure will remove the breaking strain or tendency thereto at the points on the extremities entering the hinged members from the inside. As shown in the modified form in Fig. 3, the rod 7 is intermediately twisted, as at 11, to produce an eye 12, to which the suspending-cord or analogous device is adapted to be connected.

The sections 1 and 2 and the rods 7 are preferably formed of copper-coated steel wire of a suitable gage, and the hinge members are of such material as to withstand wear and add to the durability of the entire frame or support. When the frame-sections 1 and 2 are closed, as shown by Fig. 2, it is desir-

able to have them fastened to prevent dropping apart, and one form of accomplishing this is to have the central part of the section 1 formed with an inwardly-extending horizontal loop 13 and the similar portion of the section 2 with a slight upwardly-projecting hook 14, which is adapted to enter or to be pressed into the loop 13 in the manner shown by Fig. 2, and thereby frictionally hold the two sections in immovable connected relation until forcibly separated for use. The loop 13 and hook 14 are bent into shape from the material of which the sections are composed, and this material being of an inherent resilient nature will permit the frictional binding of the parts of the fastening, as referred to. In Fig. 4 a modified form of this fastening is illustrated, and in this instance the section 2 has applied thereto at a point of location similar to that of the hook 14 a sleeve 15, which is movable on the section and carries a hook 16, adapted to be thrown into engagement with a loop on the section 1 like that designated by the numeral 13. These two forms of fastenings have been disclosed to show that the improved device is not dependent in this respect on any precise form of fastening; but it will be understood that the loop 13 and hook 14 are preferred by reason of their simplicity and reduced cost of manufacture.

The sections 1 and 2 are not intended to be limited to any precise form, though for practical purposes it has been found that the rectangular shape shown fulfils the requirements to the best advantage because of the greater expanse of support. Furthermore, in addition to the salient features of construction thus far explained it is not necessary to make the sections 1 and 2 adjustable, and such features are illustrated to show the adaptability and utility of the frame or support to canopies or nets that do not have an extended surface to cover, and conversely to provide means for the convenient use of the improved device over large surfaces. In the mode of adjustment of the sections 1 and 2, as shown, the side wires or rods are made in two parts and the ends 17 are slidingly bent over the adjacent portions of the opposite wires or rods. This will permit the sections to be lengthened or shortened, and consequently increase or diminish the dimension of the entire frame or support.

A further advantage that will be found in the use of the improved frame or support is that it is not actually necessary to give the canopy or net any particular shape, and thus cause a waste of material, as in such devices as now ordinarily constructed, and in applying the canopy or net to the frame a central opening 18 is provided, around which the material is gathered to fit closely against the upstanding loop 10 or other device which may be used or the attachment of the suspending-cord 8. It may be preferred, however, by some users to have the ends or corners at-

tached to the canopy or net by stitches or other means, and, furthermore, in some manufactures it may be desirable to shape the top of the canopy to fit the frame or support. These, however, are obvious changes, and are mentioned merely to demonstrate the possibility of accommodating all contingencies.

In Fig. 5 a modification in the telescopic feature of the sections 1 and 2 is shown, and consists in directing the engaging ends 18^a of the sections in reverse angles, so as to produce a bind sufficiently strong to obstruct and prevent accidental movement of said sections after the desired adjustment has been obtained.

In addition to the modified forms which have been noted changes in the form, proportions, and minor details may be resorted to without in the least departing from the nature or sacrificing any of the advantages of the invention.

Having thus described the invention, what is claimed as new is—

1. In a canopy frame or support, the combination of foldable sections adapted to be suspended in a horizontal position exclusively from a point above the same and having hinge connections at their inner terminals which permit the sections to fold upwardly and prevent movement thereof below a horizontal plane when open, the hinge connections having stops for engagement with each other, a transversely-extending rod projecting across the width of the sections and disposed in the same plane as the latter, the opposite extremities of the said rod serving as pintles for pivotally connecting the hinge-sections, the said rod being in central position relatively to the sections, and the sections normally extended from the rod in a longitudinal direction an equal distance, and a suspending device attached to the central portion of the rod and adapted to be secured to a point above the said rod, whereby the under part of the frame or support is clear of holding devices.

2. In a canopy frame or support, the combination of foldable sections, hinge members attached to said sections and having abutting projections to prevent the downward extent of the sections below a horizontal plane, and a transversely-extending rod of a length equal to the width of the sections and having the extremities passing through the hinge members and serving as pintles therefor, the entire canopy or frame being suspended by means of the said rod through the medium of a suspending device attached thereto.

3. In a canopy frame or support, the combination of foldable sections, hinge members attached to the inner contiguous terminals of said sections and having abutting projections to prevent the downward extent of the sections below a horizontal plane, and a transversely-extending rod having the extremities passed through the hinge members and serving as pintles therefor, the said extremities

of the rod being provided with shoulders to prevent sliding movement and also provide a brace against the hinge members, the rod also affording means for attaching a suspending
5 device.

4. In a canopy frame or support, the combination of foldable sections pivotally connected to each other, one section carrying a hook and the other a loop to receive said hook,
10 and a transversely-extending rod having the extremities thereof projecting through and

serving as pintles for the pivoting devices of said sections and also affording means for attaching a suspending device.

In testimony that I claim the foregoing as
my own I have hereto affixed my signature in
the presence of two witnesses.

JACOB T. JOHNSON.

Witnesses:

ROBT. E. CRAMP,
M. PERRY HAHN.