

No. 743,619.

PATENTED NOV. 10, 1903.

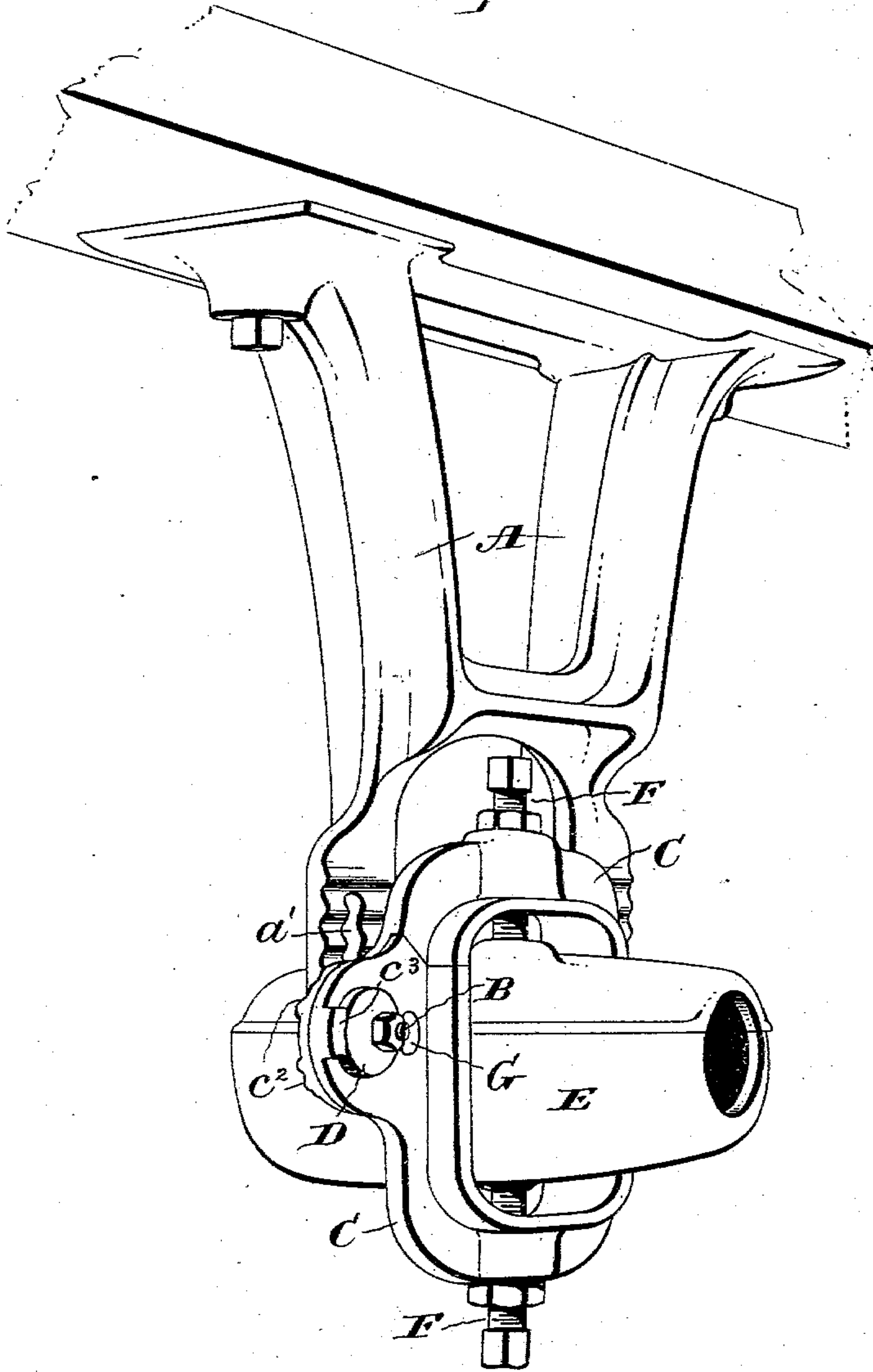
E. V. CRESSON.
SHAFT HANGER.

APPLICATION FILED SEPT. 26, 1902.

NO. MODEL.

3 SHEETS—SHEET 1.

Fig. 1.



Witnesses:
Jas. E. Hutchinson
J. L. Lawlor.

Inventor.
Emlen V. Cresson,
by Edwin J. Prindle,
his Attorney.

No. 743,619.

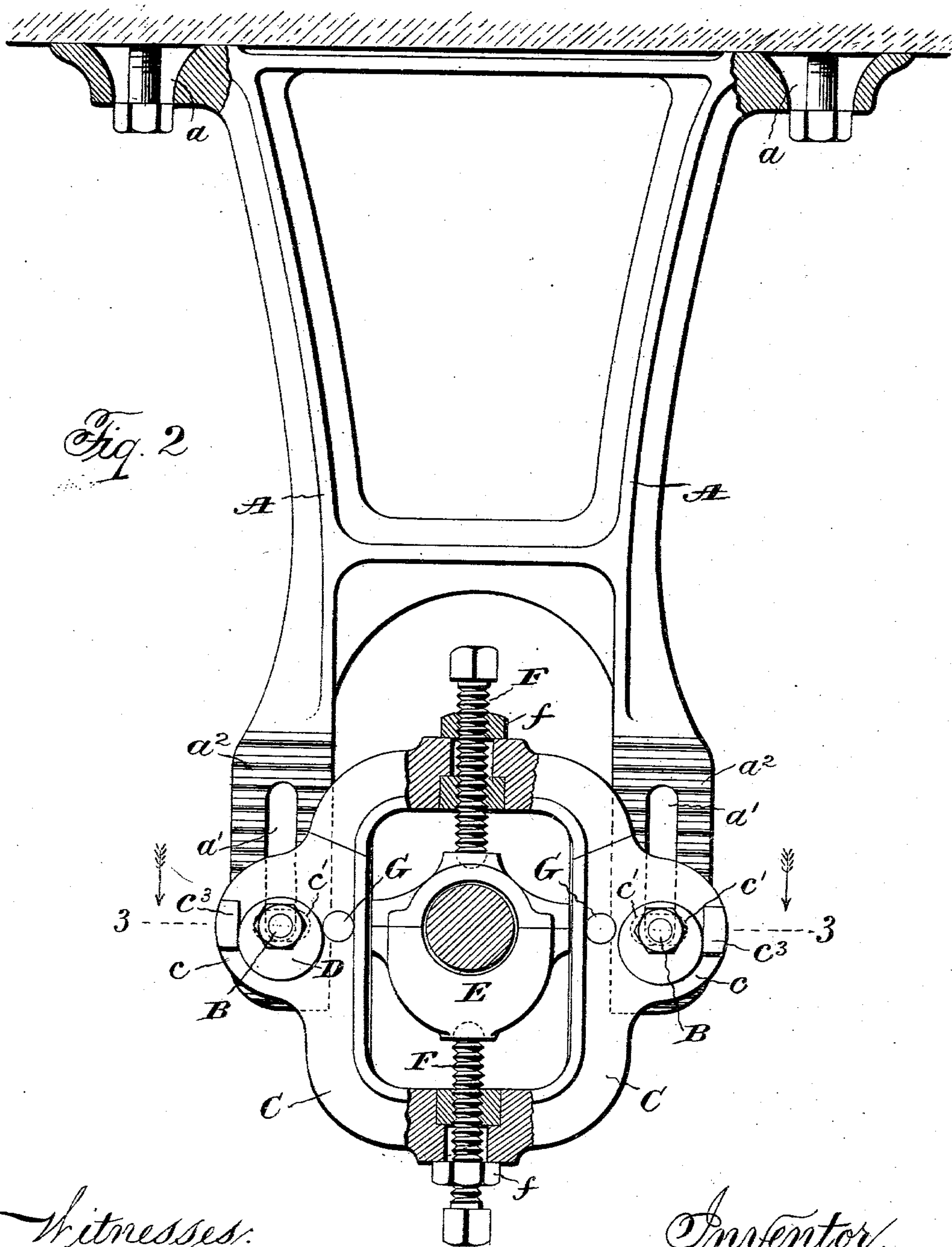
PATENTED NOV. 10, 1903.

E. V. CRESSON.
SHAFT HANGER.

APPLICATION FILED SEPT. 26, 1902.

NO MODEL.

3 SHEETS—SHEET 2.



Witnesses:
Jas E Hutchinson
J. E. Hawlor.

Inventor.
Emilen V. Cresson,
by Edwin J. Prindle,
his Attorney.

No. 743,619.

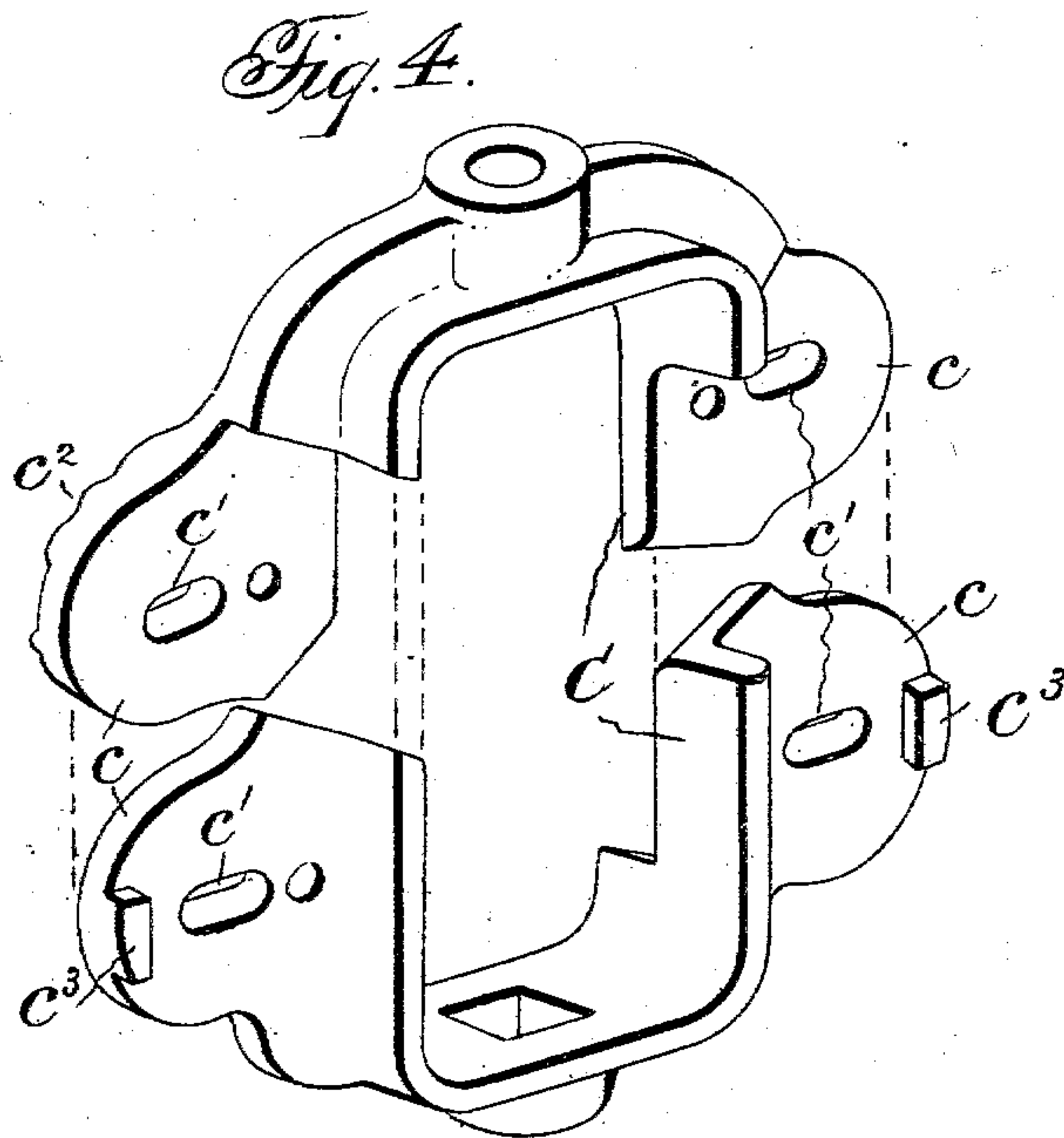
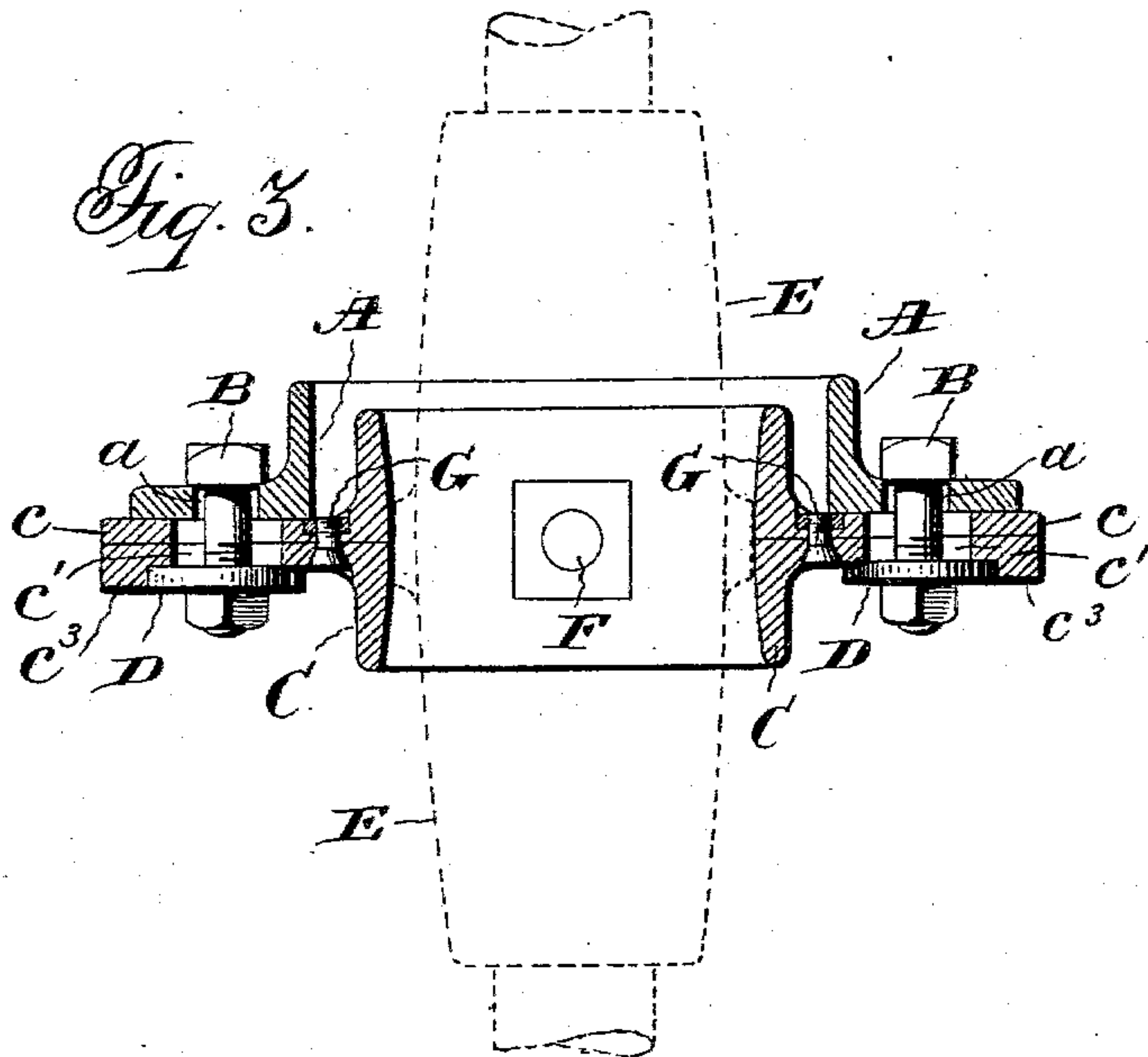
PATENTED NOV. 10, 1903.

E. V. CRESSON.
SHAFT HANGER.

APPLICATION FILED SEPT. 26, 1902.

NO MODEL.

3 SHEETS—SHEET 3.



Witnesses:
Jas. Hutchinson
J. L. Lawlor

Inventor.
Emile V. Cresson,
by Edwin J. Prindle,
his Attorney.

UNITED STATES PATENT OFFICE.

EMLLEN V. CRESSON, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
GEORGE V. CRESSON COMPANY, OF PHILADELPHIA, PENNSYLVANIA,
A CORPORATION OF PENNSYLVANIA.

SHAFT-HANGER.

SPECIFICATION forming part of Letters Patent No. 743,619, dated November 10, 1903.

Application filed September 26, 1902. Serial No. 124,981. (No model.)

To all whom it may concern:

Be it known that I, EMLLEN V. CRESSON, of Philadelphia, in the county of Philadelphia, and in the State of Pennsylvania, have invented a certain new and useful Improvement in Shaft-Hangers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a shaft-hanger embodying my invention. Fig. 2 is an end elevation, partly in section. Fig. 3 is a horizontal section on the line 3 3 of Fig. 2; and Fig. 4 is a detail view in perspective of the head of the hanger, the two parts thereof being shown as separated from each other.

The object of my invention is the production of a shaft-hanger having the qualities of all adaptability that is requisite in view of the various drops and sizes of shafts for which it may be used, so as to reduce to a minimum the number of hangers required to be kept in stock, of convenience in mounting and dismounting the shaft, and of possibility of cheap manufacture; and to these ends my invention consists in the shaft-hanger having the construction substantially as hereinafter specified and claimed.

In the embodiment of my invention which is illustrated in the drawings there is employed a cast base or frame A, comprising two upright and two horizontal members, one of the horizontal members being at the upper end of the two vertical members and two elongated holes or slots *a* being formed therein for the passage of bolts for the attachment of the hanger to a beam or rafter and the other horizontal member being at a point substantially midway between the ends of the upright members, the lower part of the frame or base being thus open at one end or in the form of a fork. Of course the form and design of the frame made can be varied as desired, it being necessary only that its lower end be forked or open. Secured to the base or frame A by two bolts B, that respectively pass through the vertical slots *a'* in the lower portions of the upright members of the frame or base, is an open frame C, having the general form of a rectangle, the said frame having on opposite

sides lugs or projections *c*, that have horizontal slots *c'*, through which the fastening-bolts B pass. The slots *c'* are located at a point to one side of a point half-way from top to bottom of the frame C, for a reason hereinafter given. Upon one side of the lugs *c* of the frame C there are heavy horizontal ribs *c²*, that engage similar ribs *a²* on the side of the base or frame A, the said ribs thus supplementing the bolts as means for supporting the frame C. Upon the opposite side of each of the lugs a disk D is pivoted eccentrically upon the bolt B, which goes through such lug and engages by its periphery a projection *c³* on the lug. By the revolution of the eccentric disk it may be placed in contact with the projection *c³* whatever be the position to which the head may be shifted horizontally, and as there are two disks, with a projection for each, the head will thereby be firmly held from lateral movement in either direction.

Within the frame C or "head," as I shall term it, is supported the shaft box or bearing E, the construction of which need not be described, as it has nothing to do with this invention. Said box or bearing is engaged above and below by screws F, the head C being perforated for each screw and having a cavity to accommodate an internally-threaded block or nut for the screw. As is usual, each screw is provided with a lock-nut *f*. In fixing the position of the box or bearing vertically the head C is moved vertically to the desired position as near as the ribs will permit, and then by means of the screws F such further adjustment as may be necessary is effected. It will be observed that the screws F are carried by the parts having the ribs, which parts form elements of the means for securing the rough adjustment of the box. Inasmuch as the slots *c'* are not in line with the vertical center of the head, it will be evident that by reversing or turning the head upside down an additional range of adjustment vertically is provided for, so that if, for example, said holes are an inch from the vertical center of the head an increase of two inches of the range of adjustment vertically can be had.

It is indispensable in a shaft-hanger that it

be unnecessary in mounting or dismounting the shaft to move the shaft endwise through the hanger, and to meet this requirement the head C is made in halves, the joint extending vertically through the lugs *c* and opening out at opposite ends on opposite sides of the head, there being thus overlapping portions of the hangers where the lugs *c* are. The bolts B, which secure the head to the base or frame A, thus serve to bind the halves of the head together, although, as a matter of convenience, to enable the head to be applied to the shaft while the latter is on the floor before being raised to the hanger, bolts G, such as stove-bolts, are employed to join the halves. The adjoining ends of the portions of the halves or sections of the head C that overlap are given such form as to resist lateral or sidewise tendency of the halves or sections relative to each other, and this form is preferably that of inclined surfaces, the inclination on both sides of the head being downward and inward in the case of those surfaces above a horizontal plane passing through the slots *c* and upward and inward in the case of the surfaces on the opposite side of such plane. The sides of the box or bearing E abut or bear directly against the inner sides of the head C, so that said box or bearing is most firmly and substantially supported. The sides of the head against which the box or bearing abut are slightly curved, and as the surfaces of the box which engage them are flat it will be evident that the box can rock laterally as may be required by the shaft. The bearing-points of the bolts F and the box permit such lateral movement and also such rocking up-and-down movement of the box, as may be required.

It will be seen that from the divided or sectional form of the head C the shaft does not have to be moved endwise in mounting or dismounting, but when, for example, it is to be mounted the head can be applied to it while it is on the floor; that by reason of the vertical slots *a'* in the base or frame A and also by reason of the invertibility of the head C, due to the eccentric location of the slots *c'*, a wide range of vertical adjustment is provided, a feature that makes it possible to largely reduce the number of varieties of hangers to be carried in stock; that by reason of the ribs *a²* and *c²* and the horizontal position of the bolts B the head has a most substantial support, being in this respect greatly superior to a construction where vertical bolts are employed, so that the weight has to be sustained only by the threads of the bolts; that besides vertical adjustment the horizontal slots *c'* permit horizontal adjustment; that by reason of the completeness of the head and its mode of attachment to the base or frame A it is interchangeable with bases or frames of different heights, one head being thus adapted for use with a number of bases or frames, a thing of considerable importance where, for example, the position of shafting in a mill is to be

shifted and the new location requires a base or frame of different drop from that of the old, it thus being necessary not to discard all of the old hangers, but simply to discard the old bases or frames, and that the head C permits the employment of different bearings or boxes, so that self-oiling or plain boxes may be used and so that boxes for shafts of various sizes may be used. The sectional form of the head is also a valuable feature, since it enables packing in smaller space than would otherwise be possible, a consideration that is of importance in shipment where the charge for transportation is based upon the space occupied and not on weight. Besides the advantages mentioned my hanger is very cheap to manufacture, since the parts are easily cast, all of the horizontal holes being self-coring, while the cheapest cores are required for the vertical holes, of which there are but four.

I of course do not limit the scope of my invention to the details of construction shown and described, as changes in many particulars can be made which will involve no departure from the spirit of my invention. For example, instead of the holes *a* and *a'* being elongated or in the form of slots they can be round or square.

Having thus described my invention, what I claim is—

1. In a shaft-hanger, the combination of a base having a forked lower end, a head for the shaft-bearing comprising an open frame made of overlapping separable parts, and removably attached at its sides to the forks of the base, connections between said frame and said forks, whereby the said frame can be adjusted vertically on said forks, and a shaft-bearing movably mounted in said head.

2. In a shaft-hanger, the combination of a base, a head for the shaft-bearing, comprising an open frame made of overlapping separable parts removably attached to the base, and connections between said frame and said base whereby said frame can be adjusted vertically on said base.

3. In a shaft-hanger, the combination of a base having a forked lower end, a head for the shaft-bearing comprising an open frame made of overlapping separable parts removably attached at its sides to the forks of the base, connections between said frame and said base whereby said frame can be adjusted vertically on said forks, and a shaft-bearing movably mounted in said head.

4. In a shaft-hanger, the combination of a head for the shaft-bearing comprising an open frame made of overlapping separable parts, and a shaft-bearing swiveled in said head, said bearing having flat surfaces on opposite sides that engage rounded surfaces on the head.

5. In a shaft-hanger, the combination of a base, a bearing-box, means for securing said box to said base in different positions, and supplemental adjusting means carried by

said first-mentioned means for adjusting the box in the same direction in which it is moved in passing from one to the other of said positions.

5 6. In a shaft-hanger, the combination of a base, a frame for the bearing-box, means for attaching said frame to said base in a series of positions, a bearing-box mounted in said frame, and means for adjusting said box in
10 said frame in the same direction in which it is moved in passing from one to the other of said positions.

7. In a shaft-hanger, the combination of a base provided with a fork having vertical
15 arms, a head for the shaft-bearing, such head comprising an open frame made of separable parts, and means for attaching said head by the sides thereof to said arms, said means being so constructed as to permit of vertical ad-
20 justment of said frame on said arms.

8. In a shaft-hanger, the combination of a base, a head for the shaft-bearing, such head being adapted to be removably secured to
25 said base, a shaft-bearing removably mounted in said head, said shaft-bearing and said head being made of separable parts, and means for securing the parts of said head together before the attachment of the latter to said base.

9. In a shaft-hanger, the combination of a
30 base, a head for the shaft-bearing, such head being adapted to be removably secured to said base, bolts for so securing said head to said base, a shaft-bearing removably mounted in said head, said shaft-bearing and said head
35 being made of separable parts, and bolts for securing the parts of said head together independently of said first-mentioned bolts.

10. In a shaft-hanger, the combination of a base having slotted members, a head for the
40 shaft-bearing provided with slots, and bolts passing through the slots of said members and said head.

11. In a shaft-hanger, the combination of a base having slotted members, and having a
45 roughened surface adjacent to the slots, a head for the shaft-bearing also provided with

roughened surfaces to engage those of the base, and bolts uniting base and head.

12. In a shaft-hanger, the combination of a base having slotted members, and having 50 horizontal ribs adjacent the slot, a head for the shaft-bearing also having horizontal ribs, and horizontal bolts connecting the base and head.

13. In a shaft-hanger, the combination of a 55 base having slotted members, and having roughened surfaces adjacent to the slots, a head having roughened surfaces to engage those of the base, bolts uniting base and head, a shaft bearing or box and adjusting-screws 60 mounted on said head, and engaging said box or bearing.

14. In a shaft-hanger, the combination of a base, a head for the shaft-bearing, an adjust- 65 able connection between the base and head comprising bolts and slots, and disks eccentrically mounted on the bolts that engage parts on the head.

15. In a shaft-hanger, the combination of a base, a head carrying shaft-supporting sur- 70 faces, and means for uniting the base and head at a point at one side to the center of the head, the head having the same formation on both sides of its center, and thereby being reversible to place the shaft-supporting 75 surfaces at different distances from said base.

16. In a shaft-hanger, the combination of a base, and a head made of separable sections with overlapping portions, said portions hav- 80 ing abutting surfaces to prevent independent movement of the sections.

17. In a shaft-hanger, the combination of a base, and a head made of separable sections with overlapping portions, said portions hav- 85 ing inclined abutting surfaces to prevent independent movement of the sections.

In testimony that I claim the foregoing I have hereunto set my hand.

EMLLEN V. CRESSON.

Witnesses:

W. E. WRIGHT,

CHAS. J. WILLIAMSON.