

(No Model.)

2 Sheets—Sheet 1.

W. H. HAYNES.

CANOPY TOP FOR CHILDREN'S CARRIAGES.

No. 565,619.

Patented Aug. 11, 1896.

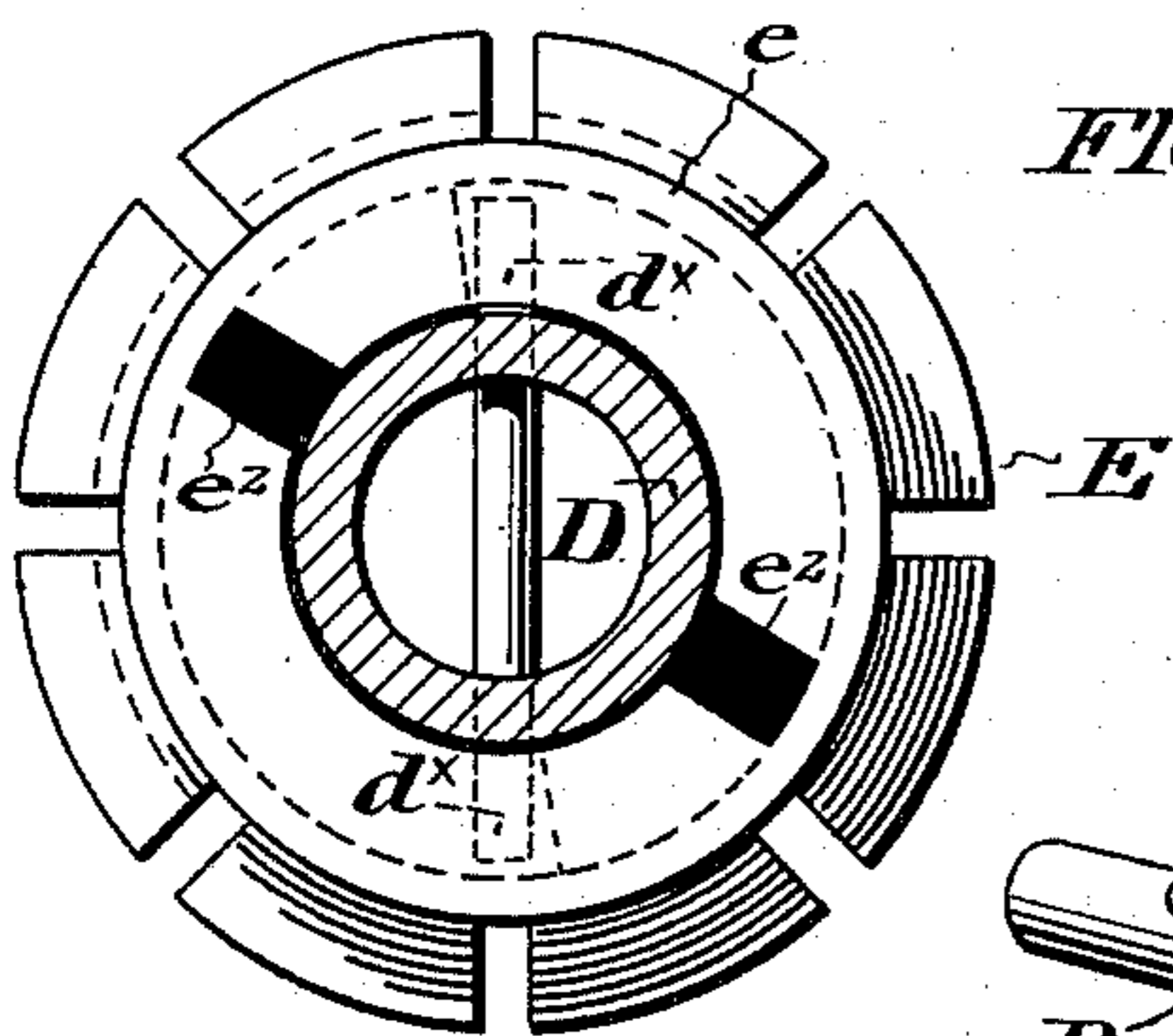
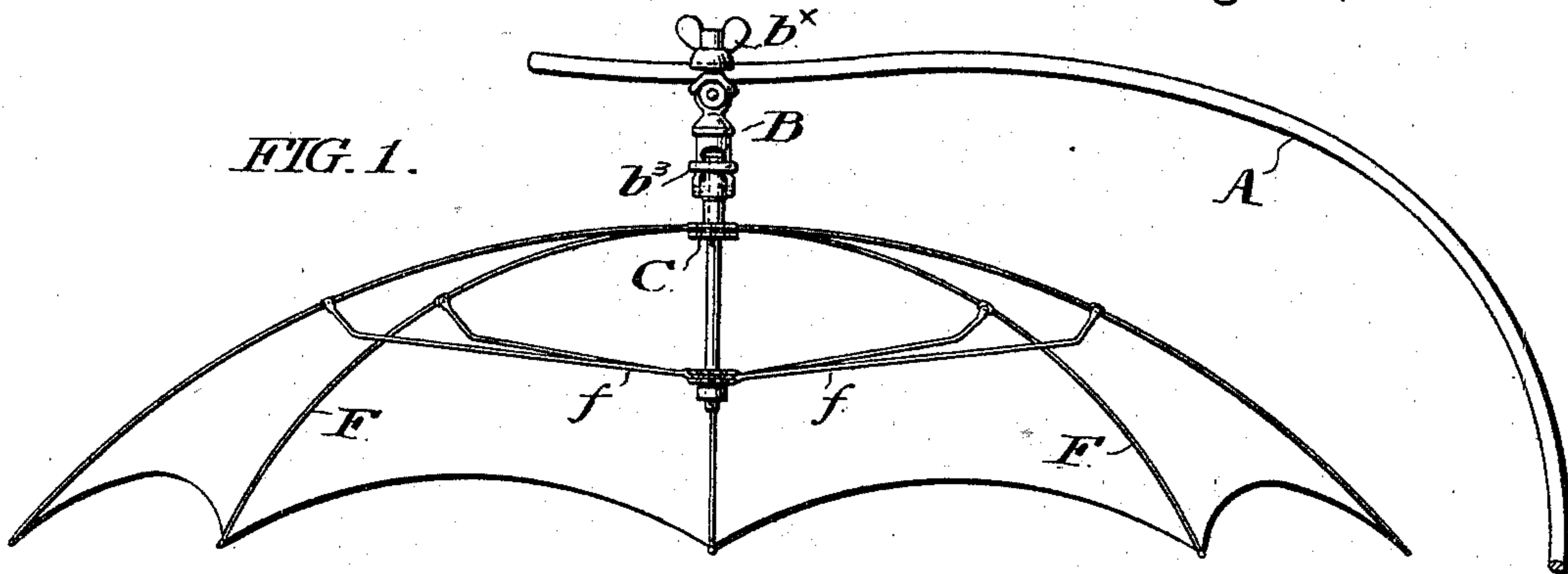


FIG. 2.

FIG. 4.

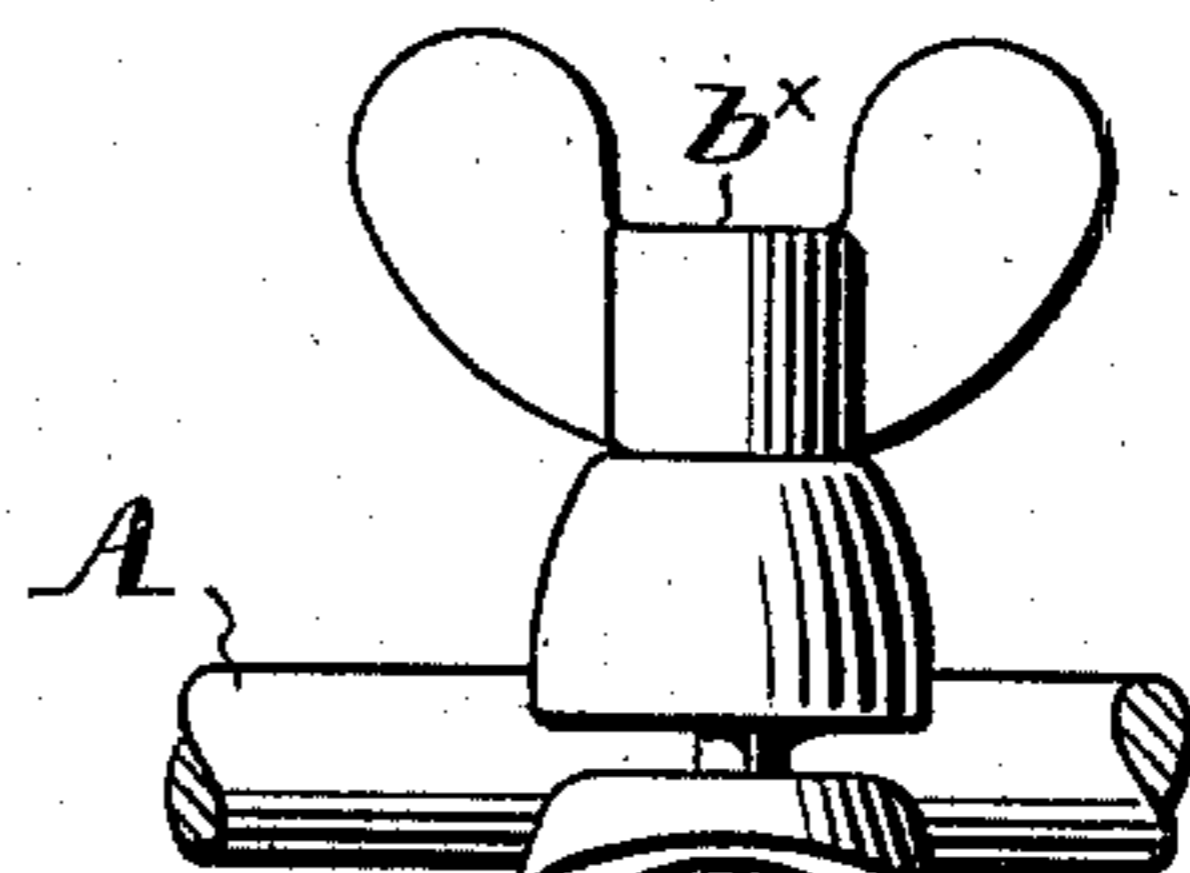


FIG. 3.

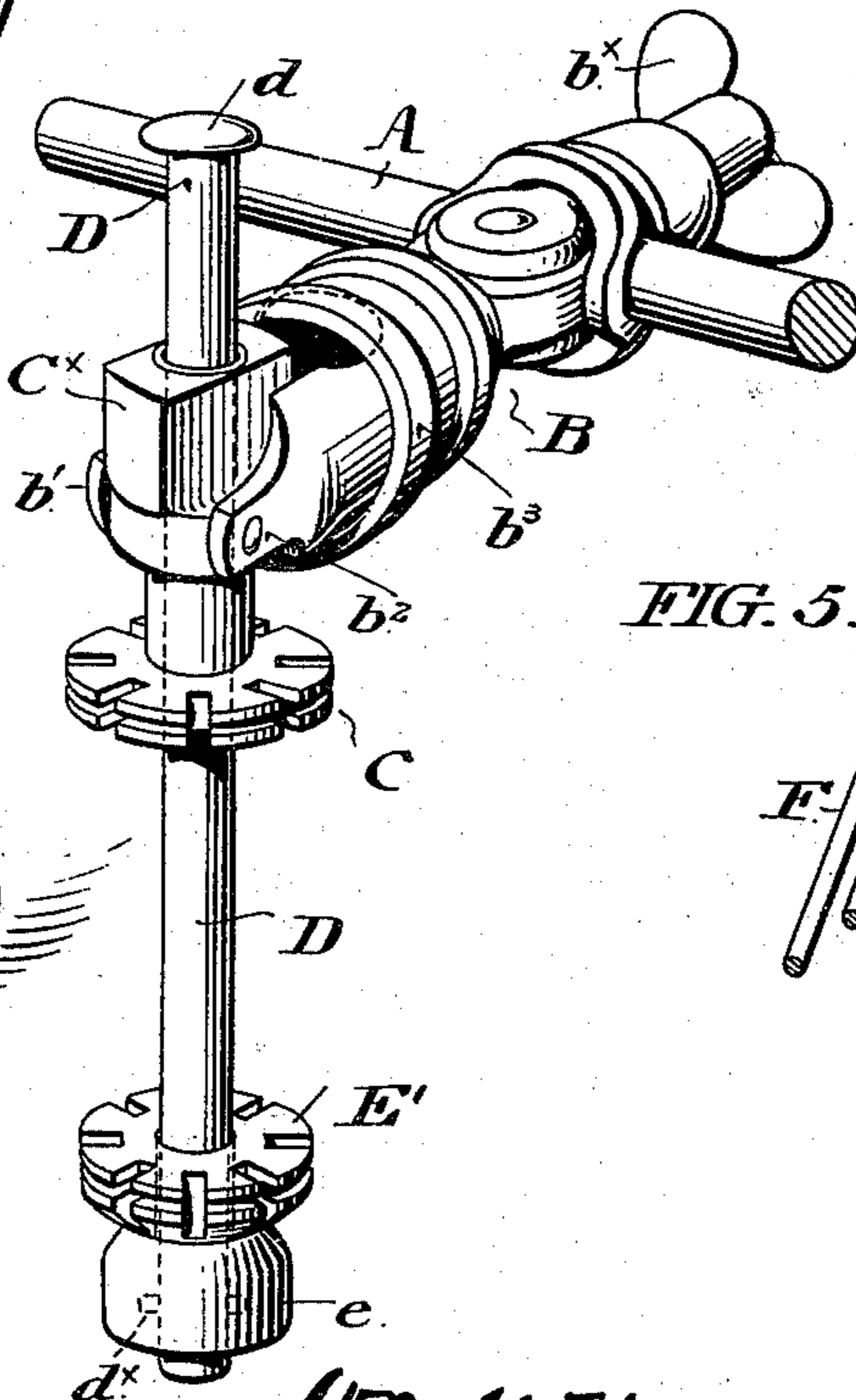
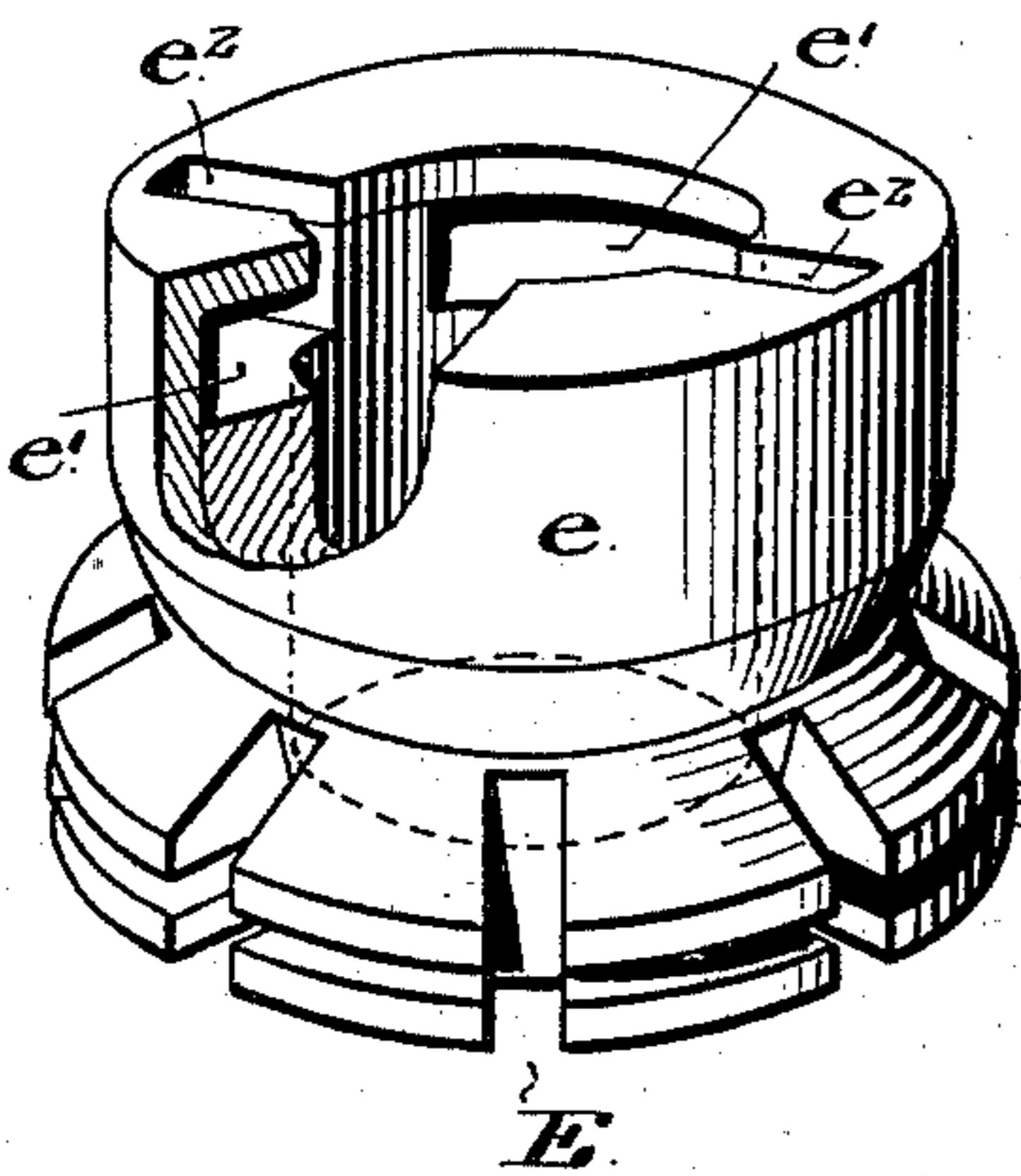


FIG. 5.

WITNESSES:

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Josh. B. Lancaster

Wm H. Haynes INVENTOR:

By his Attorneys,
Wm C. Hawbridge
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(No Model.)

2 Sheets—Sheet 2.

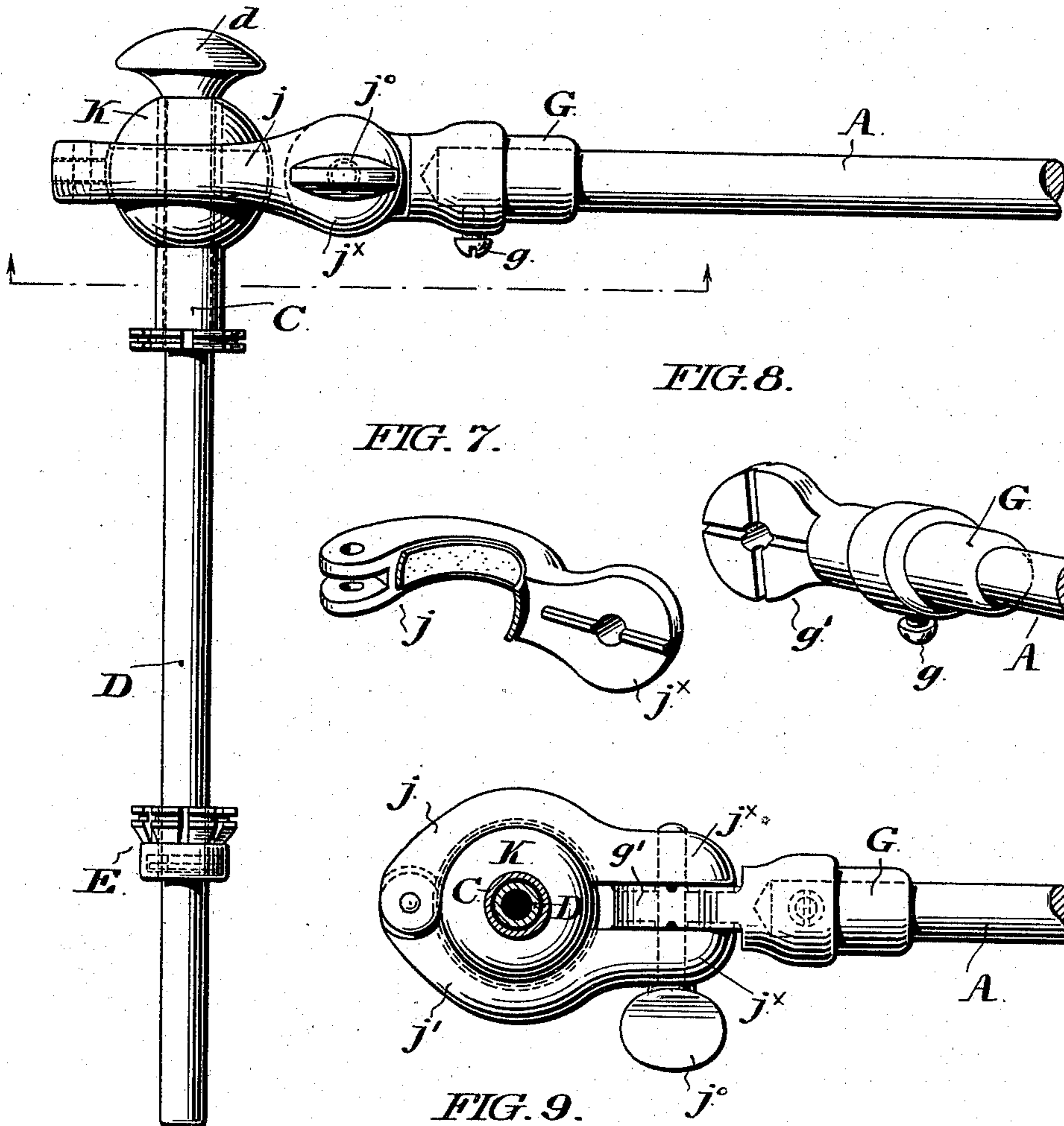
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FIG. 6.



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UNITED STATES PATENT OFFICE.

WILLIAM H. HAYNES, OF PHILADELPHIA, PENNSYLVANIA.

CANOPY-TOP FOR CHILDREN'S CARRIAGES.

SPECIFICATION forming part of Letters Patent No. 565,619, dated August 11, 1896.

Application filed May 14, 1896. Serial No. 591,484. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. HAYNES, a citizen of the United States, residing in the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Canopy Tops for Children's Carriages, of which the following is a specification:—

My invention relates to canopy tops made in the form of umbrellas.

In the accompanying drawings I illustrate and herein I describe preferred forms of convenient embodiments of my invention, the particular subject-matter claimed as novel being hereinafter definitely specified.

In the drawings,

Figure 1 is a view in side elevation of my improved canopy top shown as in place upon the canopy arm, and as distended in the position it occupies when in use,—the textile web or cover which is in practice mounted upon the ribs being, merely indicated.

Figure 2 is an under plan view of the runner.

Figure 3 is a view in perspective of the runner, shown as in inverted position.

Figure 4 is a view in perspective of a portion of the canopy arm, the carrier, the notch, the runner, and the shaft, the parts being shown in the positions they occupy in the opening and closing of the top.

Figure 5 is a view in side elevation and section of the parts illustrated in Figure 4, shown, however, in the position they occupy when the top is closed.

Figure 6 is a view in side elevation showing a modified form of my improvements.

Figure 7 is a view in perspective of a portion of the carrier shown in Figure 6.

Figure 8 is a view in perspective of a portion of the canopy arm shown in Figure 6.

Figure 9 is a top plan view of the parts shown in Figure 6.

Similar letters of reference indicate corresponding parts.

Referring to the construction shown in the first five figures of the drawings, A is the canopy arm; B is the canopy carrier mounted upon said arm, said carrier being shown as provided as to its upper end with devices of a usual character, well known in the art, by which it is adjustably secured to the canopy arm, with the result that the canopy may be

arranged in any desired position of adjustment.

Any preferred mechanism connective of the carrier and the rod may be employed.

The lower portion of the carrier is bifurcated to form the two depending lugs b' b^2 , between which is pivotally supported the notch C of the canopy, said notch being provided with an upwardly-extending tubular head C^x , the arrangement being such that said notch is adapted to swing laterally on its pivot in a plane parallel with the planes of said lugs.

b^3 is a ring mounted upon the exterior of the lower portion of the carrier, and adapted to be moved longitudinally thereof, its effect being, when moved to its lowest position, to inclose the head C^x of the notch and confine it between the lugs b' b^2 , with the result that swinging movement of the notch and connected parts will be prevented.

D is the canopy handle, mounted in the bore of, and free for longitudinal reciprocation with respect to, the notch, said handle being provided as to its upper extremity with a knob or enlargement d which, by contact with the upper end of the head of the notch, prevents said handle from falling out of the notch,—and provided as to its lower extremity with a runner engaging device d^x , shown as consisting of a pair of studs outwardly projecting on opposite sides of said handle.

E is a runner, loosely mounted upon said handle, and provided with a tubular extension e , the inner face of which is formed with a pair of oppositely disposed circumferential slots or grooves e' each of length slightly less than half of the circumference of the bore of the extension, both conveniently in a plane transverse with respect to the axis of the bore, and each terminating in a vertical groove or slot e^2 which opens through the bottom of the extension e .

The runner engaging device d^x and the grooves or slots e' e^2 form in effect a bayonet joint.

F are the main ribs of the umbrella, attached in the usual manner to the notch, and f are the short or supporting ribs, attached as to their inner ends to the runner, and as to their outer ends attached to the main ribs intermediate of the length of the latter the

arrangement of the short ribs or braces f with respect to the main ribs F being such that the runner is free to approach the notch in the closing of the umbrella, instead of moving
5 away from it as in the closing of an ordinary umbrella.

The operation of my apparatus will be readily understood.

The parts being in their normal or closed position, illustrated in Figure 5, and it being
10 desired to open the canopy top, the thumb-screw b^x , which controls the clasp of the carrier upon the canopy rod, is rotated to loosen the carrier, and the ring b^3 elevated to clear
15 the notch, said carrier is then swung laterally upon said rod until it assumes the position shown in Fig. 4, the canopy handle D remaining vertical.

The top not being open, the runner is of
20 course up in close proximity to the notch as shown in Figure 5.

Thereupon the enlargement d at the top of the canopy handle is grasped and drawn upward until the studs d^x make contact with
25 the bottom of the runner extension, and, in the slight rotation of the handle come beneath and enter and reach the top of the vertical slots e^2 , and, thereupon, said canopy handle is further rotated to carry said studs
30 within the circumferential slots e' of the runner extension.

The canopy handle is then forced downward, carrying, of course, the runner with it, until the runner occupies the position shown
35 in Figure 1, and the enlargement d of the canopy handle is in proximity to the upper end of the head of the notch.

The canopy being now open or spread, the carrier is restored to its original position
40 shown in Figure 1, and the ring b^3 brought down to the position shown in Figures 1 and 5, so that it incloses and confines against movement the head of the notch, and makes rigid the joint between the canopy top and the carrier.
45

As will be understood, when it is desired to close the canopy, the carrier is swung to the position shown in Figure 4, the canopy handle, which is still engaged with the runner,
50 is drawn upward until said runner occupies the position shown in Figure 5, and said handle is then rotated until its runner engaging projections come within and descend through the vertical slots e^2 in the runner, and thereupon the canopy handle drops back to its original position shown in Figure 5, leaving the runner in its elevated position.
55

As will be understood, my device is simple, compact, and capable of easy and expeditious
60 operation.

Umbrella canopy tops when used in connection with children's carriages, depend over the carriages in such position that it is difficult to get access to their interior, as it has
65 heretofore been necessary to do, in order to open and close them.

When constructed and arranged in accord-

ance with my invention, however, they may be operated from above and without the necessity of reaching beneath the canopy which
70 greatly enhances their convenience and desirability.

At the same time, the canopy handle is, both in the open and in the closed positions, of the canopy, maintained in position within
75 the canopy, and does not protrude or present a cumbersome or unsightly appearance.

In Figures 6, 7, 8, and 9, I illustrate a modified form of my invention in which a somewhat different arrangement of carrier and
80 connection between the carrier and the notch are employed.

In said last mentioned figures I show the extremity of the canopy rod as equipped with a thimble G secured by a setscrew g , the outer
85 extremity of which thimble is provided with a flat plate which I term a locking plate g' , embodying a central transverse aperture, and a series of grooves, four in number, formed in each side face of said plate, said grooves
90 being radial with respect to the central aperture.

J is a locking frame, the same consisting of two substantial counterpart bow-arms j j' pivotally connected together at their outer
95 extremities and each provided at its inner end with an apertured clamp plate j^x which plates are adapted to embrace between them the locking plate referred to, said plates being provided as to their inner faces with beads which
100 take into the corresponding grooves of the locking plate, the particular grooves entered being determined by the set of the parts.

j^0 is a screw which passes through the aperture of the locking and clamp plates to secure the locking frame rigidly in position.
105

The curved inner faces of the bow-arms j j' are, when said frame J is mounted upon the locking plate, concentric with respect to each other, and form a true circle which is
110 complete except for the small open space occurring opposite the locking plate.

The inner faces of said members are concaved or dished, so to speak, from their upper to their lower edges, as shown in Figure 7,
115 and in the dotted lines in Figures 6 and 9,—with the result that said locking frame is adapted to be seated snugly and retain a firm hold upon a spherical top K , which, in the modified form of my invention shown in figures under consideration, is shown as mounted upon or formed as a part of the notch C .
120

As a result of this arrangement, said sphere K , and the locking frame J referred to, form in effect a ball and socket joint, by virtue
125 of which a very complete adjustment of the angle of inclination of the notch and canopy handle and consequently of the canopy as a whole, with respect to the canopy rod, may be secured, the adjustment being effected by
130 loosening the thumb or binding screw which passes through the locking plate, setting the sphere at such position within the locking frame J as will secure the desired inclination

for the handle, and then tightening said screw.

The notch and the runner of Figure 6 are connected with the ribs of an umbrella canopy in the manner set forth in connection with the description of the first five figures of the drawings; and the canopy handle in the construction last under consideration,—being provided with the runner retainer projections and the runner being provided with slots and grooves,—operates in precisely the manner first detailed.

In the employment of the devices of the construction and arrangement shown in Figures 6, 7, 8, and 9, I prefer to provide the inner faces of the locking frame with a washer or washers of leather or other yielding material, to prevent injury to the sphere, which latter presents a very ornamental appearance and adds to the attractiveness of the canopy.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. In an umbrella canopy, in combination, the notch, the runner, a canopy handle passing through and free for longitudinal movement with respect to the notch, and through and below the runner, and normally free for longitudinal movement with respect to the same, a knob or enlargement at the upper end of the handle to prevent its withdrawal from the notch, and means for temporarily positively engaging the handle with the runner, substantially as set forth.

2. In an umbrella canopy, in combination, the notch, the runner, a canopy handle extending above the canopy and passing through, free for longitudinal movement with respect to, the notch, the runner mounted on said handle, and normally free for longitudinal movement upon said handle, and adapted to be connected by a bayonet joint with said handle, and a knob or enlargement at the upper end of the handle to prevent its withdrawal from the notch, substantially as set forth.

3. In an umbrella canopy, in combination, the notch, the runner, a canopy handle extending above the canopy and passing through, free for longitudinal movement with respect to, the notch, the runner mounted on said handle and normally free for longitudinal

movement with respect to said handle, a projecting stud mounted on said handle, and a corresponding slot formed in said runner, substantially as set forth.

4. In an umbrella canopy, in combination, the notch, the runner, the canopy handle passing through and free for longitudinal movement with respect to the notch, and through and normally free for longitudinal movement with respect to the runner, means for temporarily engaging said handle with the runner, a carrier to which said notch is pivotally connected, and a binding ring mounted upon and free for longitudinal movement with respect to said carrier,—substantially as set forth.

5. An umbrella canopy embodying a notch, a runner, a handle passing through and free for longitudinal movement with respect to the notch and through and normally free for longitudinal movement with respect to the runner, a knob or enlargement at the upper end of the handle to prevent its withdrawal from the notch, means for temporarily positively engaging the handle with the runner, canopy ribs connected to the notch, and braces connected to the runner and to the ribs at points intermediate of the length of the latter, the arrangement being such that in the closing of the canopy the runner is carried into close proximity to the notch, substantially as set forth.

6. In an umbrella canopy, in combination, the notch, having a head, the runner, a canopy handle passing through and free for longitudinal movement with respect to the notch and also through the runner, means for temporarily engaging said handle with the runner, and a canopy carrier the lower portion of which is provided with a pair of lugs, between which the head of the notch is pivotally supported, and a ring mounted and free for movement longitudinally of said carrier, substantially as set forth.

In testimony that I claim the foregoing as my invention I have hereunto signed my name this 11th day of May, A. D. 1896.

WILLIAM H. HAYNES.

In presence of—

F. NORMAN DIXON,
THOS. K. LANCASTER.