

No. 760,068.

PATENTED MAY 17, 1904.

E. A. HOWE.
HAT FRAME FORMING DEVICE.

APPLICATION FILED SEPT. 25, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

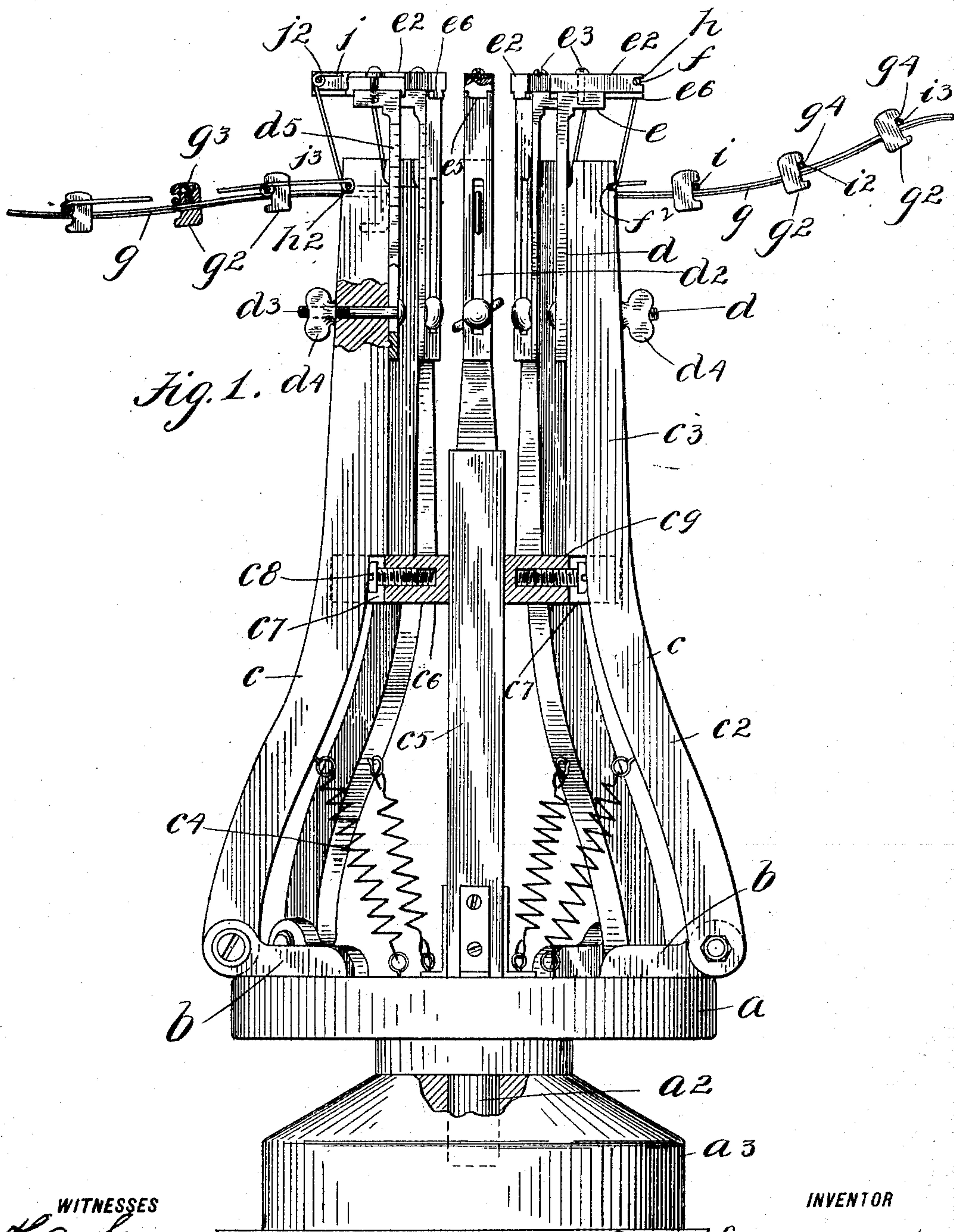


Fig. 1.

WITNESSES

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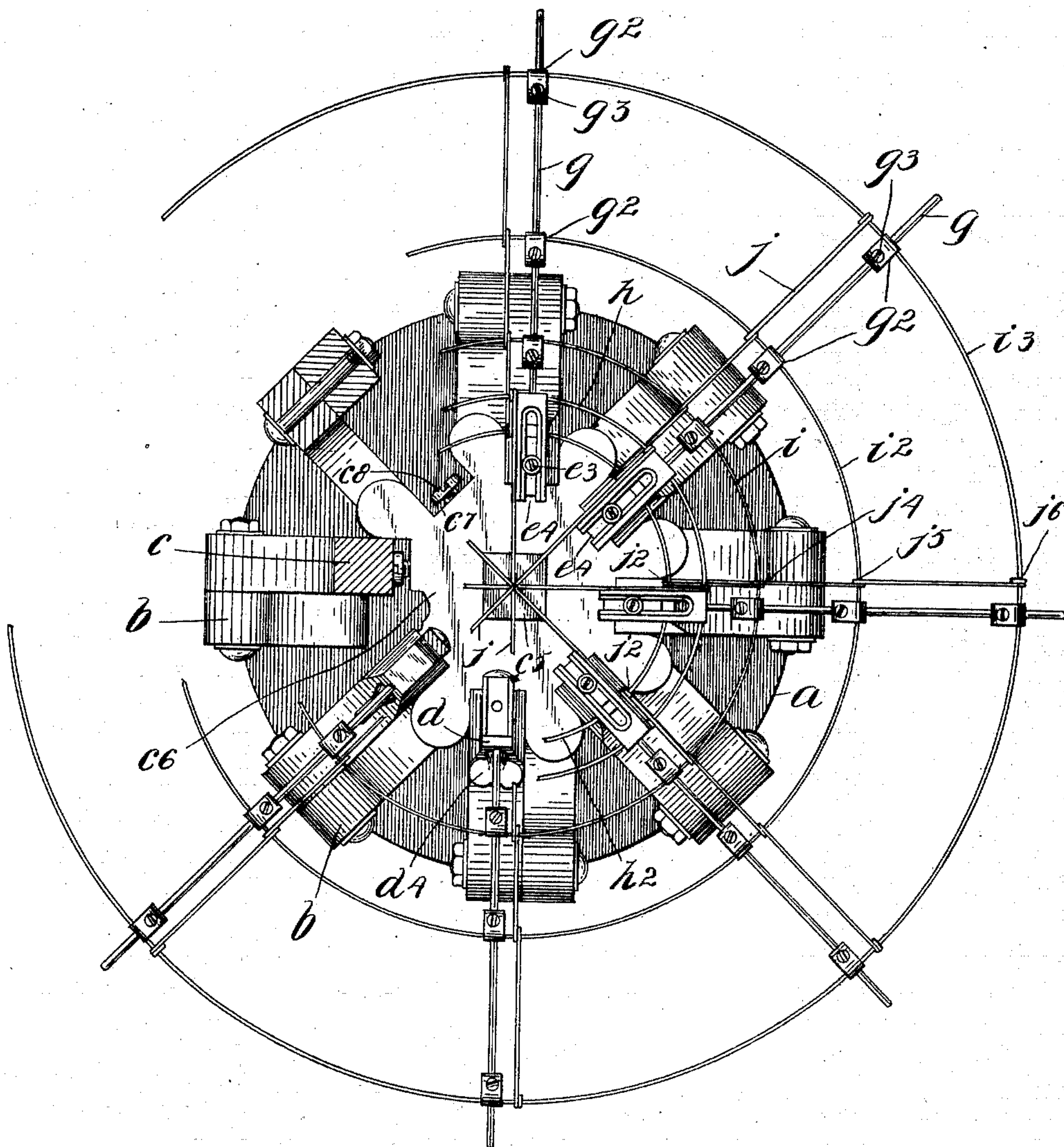
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Fig. 2.



WITNESSES
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UNITED STATES PATENT OFFICE.

EDWARD A. HOWE, OF NEW YORK, N. Y.

HAT-FRAME-FORMING DEVICE.

SPECIFICATION forming part of Letters Patent No. 760,068, dated May 17, 1904.

Application filed September 25, 1903. Serial No. 174,587. (No model.)

To all whom it may concern:

Be it known that I, EDWARD A. HOWE, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Hat-Frame-Forming Devices, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide an improved device or former for use in the making of wire hat-frames for ladies' hats; and with this and other objects in view the invention consists in a device for the purpose specified, constructed as hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a sectional side view of my improved device with parts of the construction removed and showing part of the hat-frame; and Fig. 2, a plan view, partially in section, with part of the construction removed and showing part of the hat-frame.

In the practice of my invention I provide a base plate or board a , which is preferably circular in form and which is provided centrally of the bottom thereof with a pivot-pin or journal a^2 , adapted to be set into a block, frame, or other support a^3 and on which the hat-frame former may be rotated in the operation thereof, as hereinafter described.

Secured to the top of the base a radially thereof are a plurality of elbow-supports b , which are preferably eight in number and to which are hinged or pivoted upwardly-directed arms c , composed of inwardly-curved bottom portions c^2 and upright top portions c^3 , and secured to the inwardly-curved portions of said arms are contractile springs c^4 , which are also secured to the central portion of the base a , and said base a is also provided with a central upright member c^5 , which is preferably rectangular in cross-section and on which is mounted a vertically-movable block c^6 , the perimeter of which is provided with radial re-

cesses c^7 , adapted to receive the arms c , which are also preferably rectangular in cross-section, and in each of the recesses c^7 is placed a screw c^8 , by means of which the inward movement of the arms c may be regulated when the block c^6 is in its highest position. The upward movement of the block c^6 is limited by inwardly-directed shoulders c^9 on the arms c , and when said block is moved downwardly the upper ends of the arms c may be brought closely together, as will be readily understood, and said arms are always normally drawn inwardly by the spring c^4 .

Secured to the upper end of each of the arms c and to the inner sides thereof is a vertically-adjustable bar or plate d , having a longitudinal slot d^2 , through which is passed a bolt d^3 , provided with a screw-threaded end, which is directed outwardly and provided with a thumb-nut d^4 , and by means of this construction the bars or plates d may be vertically adjusted on the arms c , as will be readily understood, and said bars or plates are also provided with a scale d^5 , by which the extent of their adjustment may be measured. Each of the bars or plates d are provided at their upper ends with an outwardly and radially directed support e , and on these supports e are placed radially-movable blocks or wire-holders e^2 , which are held in position by screws e^3 , which are passed through longitudinal slots e^4 , formed therein, and into the supports e . In the form of construction shown the supports e are provided in the top thereof with longitudinal grooves e^5 , and the blocks e^2 are provided on the bottom thereof with longitudinal tongues e^6 , which fit in said grooves; but these parts may be formed in any desired manner, all that is necessary in this connection being to make the blocks e^2 radially adjustable on the upper end of the plates or bars d . The blocks e^2 are all provided in their outer ends with horizontally-arranged grooves f , and the upper ends of the arms c are provided with similar horizontally-arranged transverse grooves f^2 in their outer sides, and secured to each of said arms c , just below the groove f therein, is a radially-arranged supplemental arm g , composed of flexible metal, such as brass, and adapted

to be bent upwardly or downwardly or into any desired position.

In forming a hat-frame, supposing the parts of the former to be in the position shown in Fig. 1, a wire h is passed around the ends of the blocks e^2 and secured in the grooves f and the ends of said wire are connected to form a ring, and this wire constitutes the crown-wire of the hat-frame. Another wire h^2 is passed around the upper ends of the arms c in the grooves f and drawn tightly and the ends thereof secured, and this wire constitutes the head wire of the hat-frame and fixes the diameter of the crown of the hat-frame where it fits the head, while the wire h fixes the diameter of the top of the crown of the hat-frame. The supplemental arms g are provided with blocks g^2 , which are adjustable thereon and which are provided with set-screws g^3 , by which they may be secured in any desired position on said arms, and these blocks g^2 are provided in their outer sides each with a recess g^4 . After the wires h and h^2 have been secured in position in the operation of forming a hat-frame, as hereinafter described, other wires i , i^2 , and i^3 are passed around the blocks g^2 , as shown in the drawings, and the ends thereof secured in any desired manner. Radially-arranged wires j , eight of which are shown in the drawings, are then passed across the top of the former and wrapped around the wire h , as shown at j^2 in Figs. 1 and 2, and then carried down and wrapped around the wire h^2 , as shown at j^3 , and then outwardly and radially and wrapped around the wires i , i^2 , and i^3 in the order named, as shown at j^4 , j^5 , and j^6 . This operation forms the hat-frame, and by depressing the central block e^6 the upper ends of the arms c will be drawn together and the hat-frame may be removed from the former, as will be readily understood. By bending the supplemental arms g upwardly or downwardly the rim of the hat may be given any desired formation in cross-section, and it will also be apparent that the passing of the wires i , i^2 , and i^3 around the blocks g^2 may be done in such a manner as to give the rim of the hat different widths in cross-section at different points. By adjusting the bars or plates d vertically the crown of the hat-frame may be given any desired height, and by adjusting the blocks e^2 radially the width of the crown of the hat-frame at the top may be regulated as desired, and the diameter of the head portion of the crown of the hat-frame or of the wire h^2 may be regulated by means of the screws e^3 , which regulate the inward movement of the arms c .

Any suitable material may be employed in the construction of my improved hat-frame former; but I prefer to make the radially-arranged arms g of flexible material, so that said arms may be bent so as to give the rim of the hat-frame any desired form or contour. It will also be apparent that various changes in and modifications of the construction of my

improved hat-frame former as herein described may be made without departing from the spirit of my invention or sacrificing its advantages, and I reserve the right to make all such alterations therein as fairly come within the scope of the invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A hat-frame former, comprising a base, vertically-arranged and radially-movable arms connected therewith, means for regulating the inward movement of said arms, vertically-adjustable members connected with the upper ends of said arms, radially-adjustable wire-holders connected with the upper ends of said members, radial flexible arms connected with the upper ends of the first-named arms and adjustable devices mounted on said flexible arms, substantially as shown and described.

2. A hat-frame former, comprising a base, vertically-arranged and radially-movable arms connected therewith, a vertically-movable device mounted between said arms and adapted to regulate the movement thereof, radially-adjustable wire-holders connected with the upper ends of said arms and vertically-adjustable, radially-arranged and flexible arms connected with the upper ends of the first-named arms, and adjustable wire-holding devices connected with said flexible arms, substantially as shown and described.

3. A hat-forming device, comprising a base provided with vertically-arranged and radially-movable arms, means for limiting the inward movement of said arms, vertically-adjustable wire-holders connected with the upper ends of said arms and provided in their outer ends with horizontally-arranged grooves, said arms being also provided at the top thereof and in the outer sides thereof with horizontally-arranged grooves, supplemental, flexible, radial arms connected with said radially-movable arms below the grooves therein and adjustable wire-holding devices mounted on said flexible arms, substantially as shown and described.

4. A hat-frame former, provided with vertically-arranged radially-movable main arms, means for regulating the inward movement of said arms, vertically and radially adjustable wire-holding devices connected with the upper ends of said arm, radial, flexible, supplemental arms connected with the first-named arms at or near the top thereof and wire-holding devices connected with said flexible arms, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 23d day of September, 1903.

EDWARD A. HOWE.

Witnesses:

F. A. STEWART,
C. J. KLEIN.