

No. 775,175.

PATENTED NOV. 15, 1904.

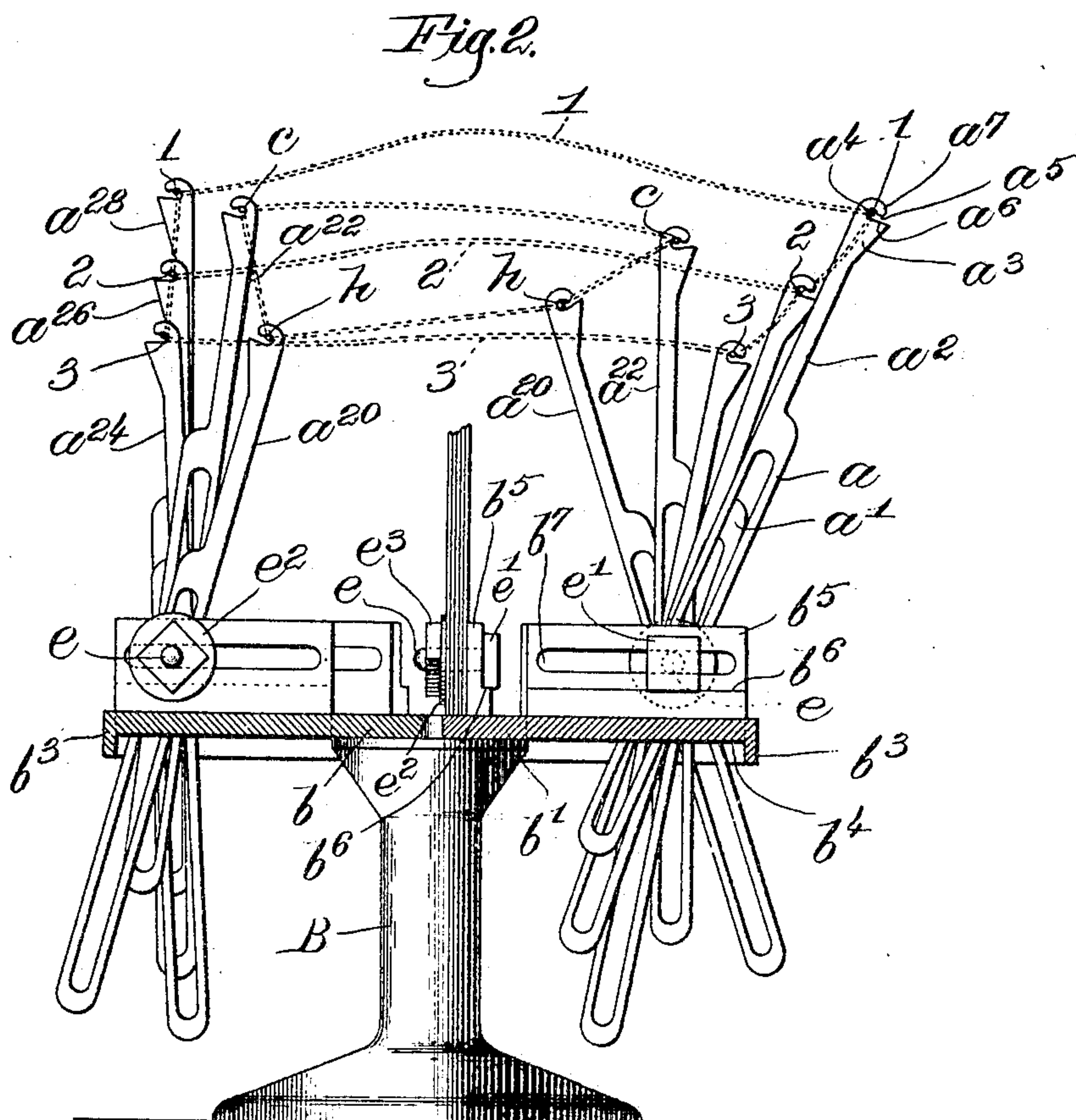
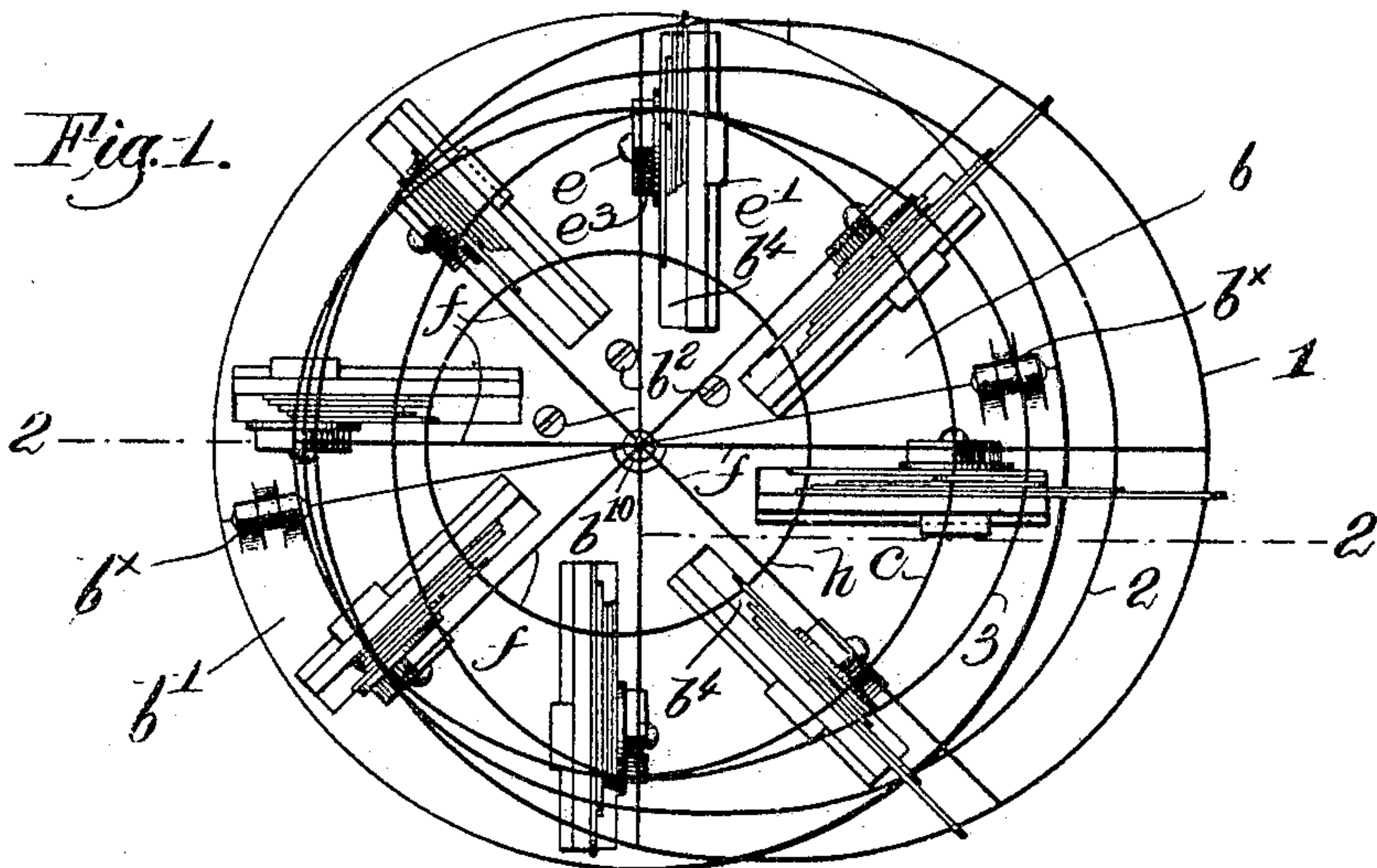
W. M. JAMESON.

DEVICE FOR FORMING WIRE HAT FRAMES.

APPLICATION FILED AUG. 19, 1904.

NO MODEL.

3 SHEETS--SHEET 1.



Witnesses:

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Warren to Elven.

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Wintthrop H. Jameson,
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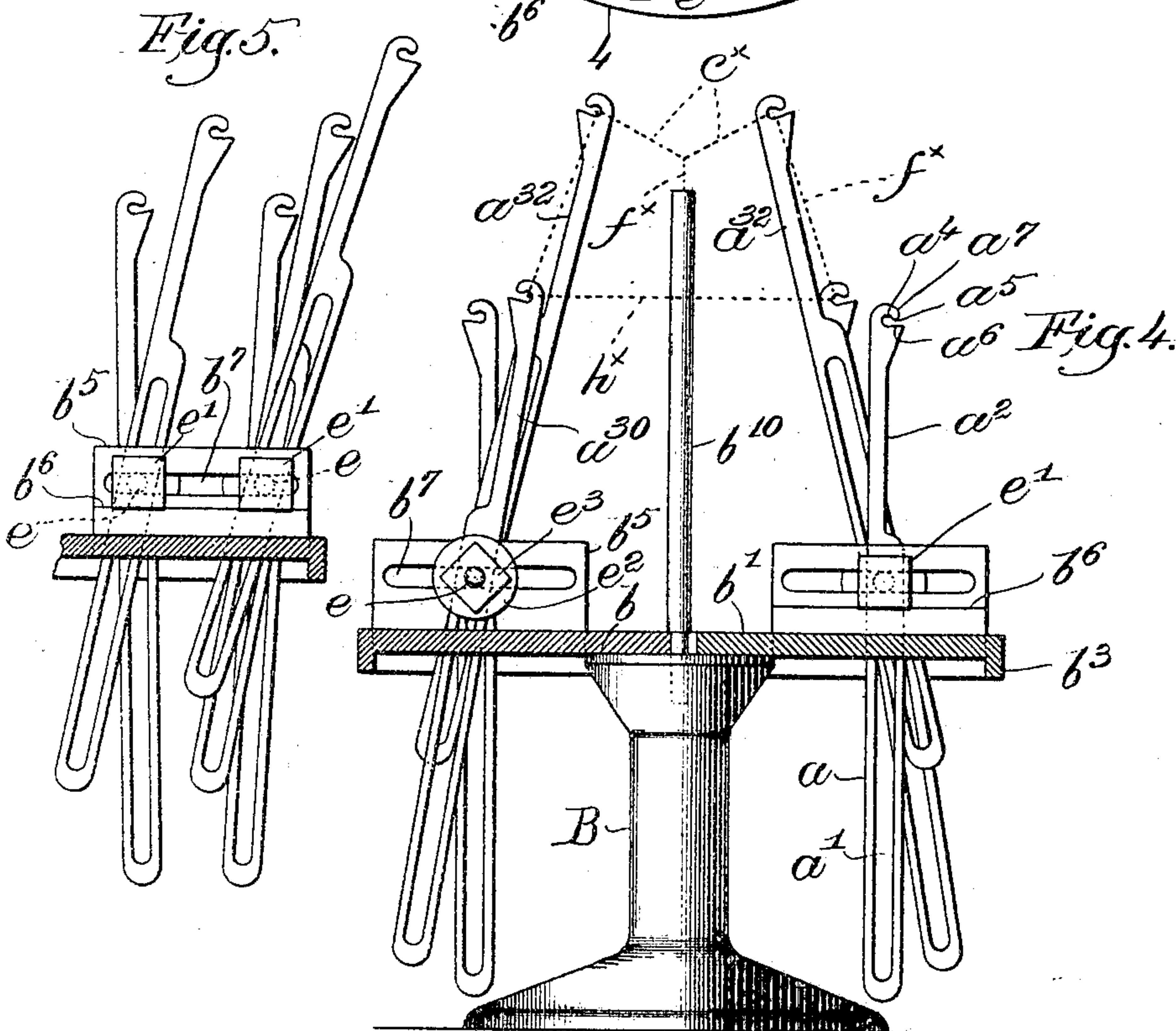
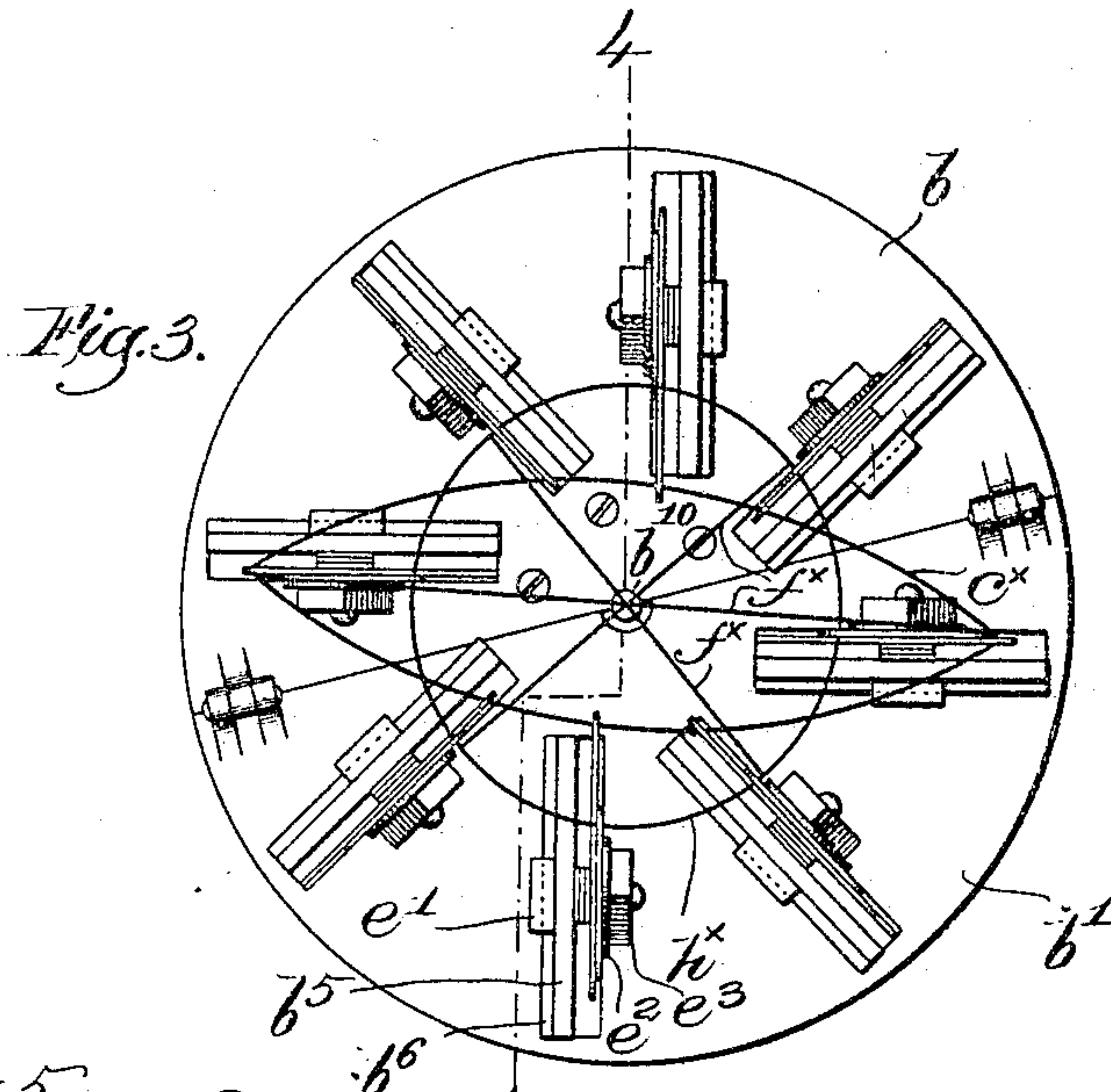
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

Fig. 6.

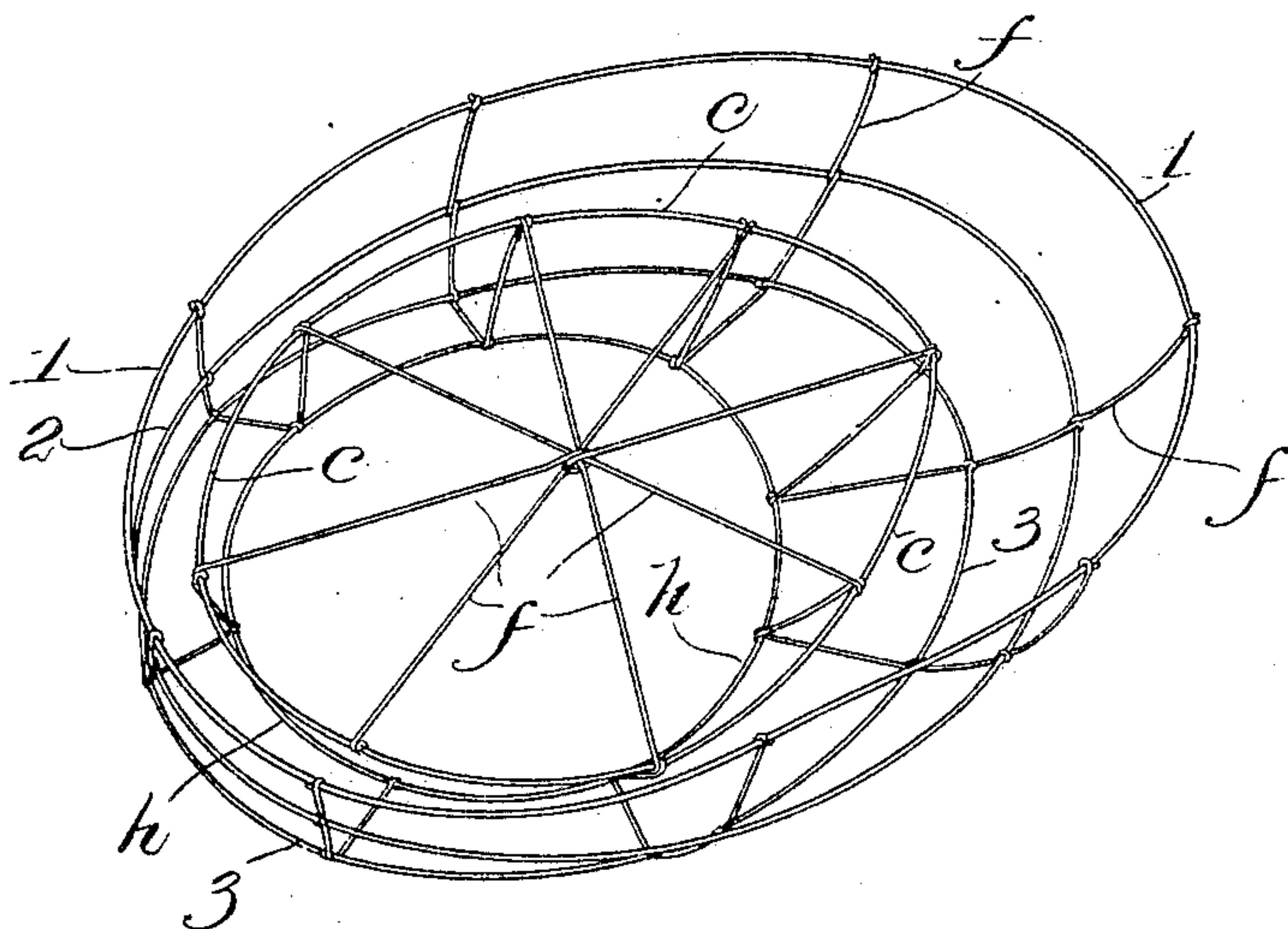
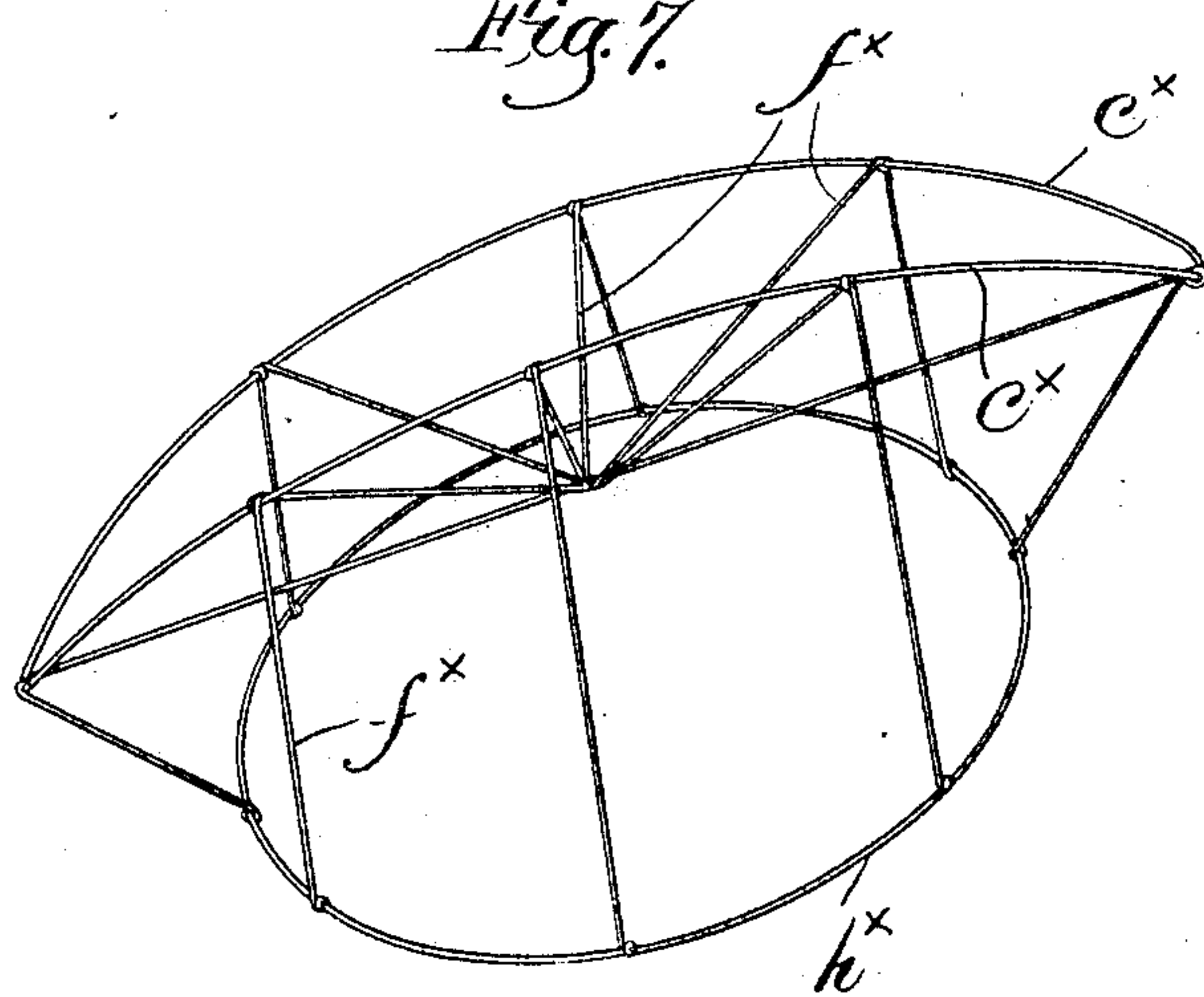


Fig. 7.



Witnesses.

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UNITED STATES PATENT OFFICE.

WINTHROP M. JAMESON, OF CAMBRIDGE, MASSACHUSETTS.

DEVICE FOR FORMING WIRE HAT-FRAMES.

SPECIFICATION forming part of Letters Patent No. 775,175, dated November 15, 1904.

Application filed August 19, 1904. Serial No. 221,376. (No model.)

To all whom it may concern:

Be it known that I, WINTHROP M. JAMESON, a citizen of the United States, residing at Cambridge, county of Middlesex, State of Massachusetts, have invented an Improvement in Devices for Forming Wire Hat-Frames, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention has for its object the production of a device for forming twisted-wire hat-frames for ladies' hats whereby the construction of the hat-frame is greatly facilitated and its removal when completed accomplished quickly and without distortion of the frame.

Hat-frames made of twisted wire are made up in various regular and irregular shapes, with circular, elongated, flat, indented, and straight or bell crowns and with brims and coronets varying in shape according to the design, some of the shapes being of such irregular character that much difficulty is at times experienced in removing the completed frame from the device on which it is made.

In my present invention the construction is such that the simplest or most complex design of hat-frame can be made without difficulty and the completed frame readily removed without distorting or changing the shape in the least. I have also provided novel means for not only firmly supporting and holding the round-and-round wires of the frame in position while making the frame, but for readily releasing the wires upon completion of the frame.

The various novel features of my invention will be fully described in the subjoined specification, and particularly pointed out in the following claims.

Figure 1 is a top or plan view of a device for forming wire hat-frames embodying my present invention, the wire-supporting members being set for the formation of a hat-frame with a bell crown, a brim, and coronet. Fig. 2 is an enlarged detail of the device, partly in side elevation and transverse section, the section being taken substantially on the irregular line 2 2, Fig. 1. Fig. 3 is a view similar

to Fig. 1, but showing the device arranged for forming a hat-frame of an entirely different shape. Fig. 4 is a detail thereof in elevation and partial section on the line 4 4, Fig. 3, looking toward the right. Fig. 5 is a detail showing in side elevation a modified arrangement of the grouping of the wire-supporting members. Fig. 6 is a perspective view of the hat-frame made on the device when set as in Figs. 1 and 2, and Fig. 7 is a similar view of the hat-frame made by setting the forming device as illustrated in Figs. 3 and 4.

I have herein shown the device as having a collapsible base, comprising two semicircular parts b b' , hinged together at b^x and with one of the parts, as b , rigidly secured by screws b^2 , Fig. 1, to a stand or pedestal B of a height convenient to the operator and affording a firm support for the whole device. The base members are conveniently made as metal castings, having each a peripheral depending flange b^3 to strengthen and stiffen the part, the weight of the part b' being ordinarily sufficient to maintain it flat and in operative position, as shown. The base portions are provided with elongated slots b^4 , extended outward from the center toward the periphery of the base and substantially parallel to radial lines thereof, as shown in Fig. 1, and adjacent each slot is an upturned elongated guide b^5 , preferably integral with the base. Each guide has one upright side (that one farthest from the adjacent slot) shaped to present a locking-shoulder b^6 below and parallel to an elongated slot b^7 in the guide, such construction being clearly shown in Figs. 2 and 4.

Referring to Figs. 1 and 3, I have shown four of the guides on each half portion of the base; but a greater or less number of said guides may be employed, as desired, it being preferable, however, to have as many guides as there are to be fore-and-aft wires leading from the central portion of the hat-frame to be made. Each guide is arranged to support several members adapted to support the round-and-round wires of a hat-frame during the formation thereof, and the members may be arranged in a single group on each guide, which is the preferred arrangement and shown in

Figs. 1 to 4, inclusive, or they may be arranged in double groups, as in Fig. 5, to be hereinafter referred to.

The wire-supporting members or arms are practically counterparts of each other, and a detailed explanation of one will suffice. Each member is made of an elongated strip of flat stiff metal, its body portion a having a long slot a' therein lengthwise of the body, and above the body the member is shown as reduced in width, as at a^2 , and terminating in an enlarged head a^3 . The inner edge of the head is preferably curved, as shown, and a notch is formed in its outer edge to constitute a wire-seat a^4 , having an elongated entrance a^5 at its outer side, the head being extended to form an elongated guide-shelf a^6 below the entrance. Above the entrance the head is shaped to present a curved lip a^7 , which overhangs the entrance to the wire-seat. As will be more apparent hereinafter, the guide-shelf a^6 facilitates the insertion of the round-and-round wire of the hat-frame through the entrance a^5 into the wire-seat a^4 , and when seated the wire is prevented from accidental removal by the lip a^7 , which projects beyond the seat and forms the upper side of the entrance thereto.

When the forming device is collapsed, the round-and-round wires are at once released from the various seats a^4 by the inward movement of the upper ends of the supports.

A group of the wire-supporting members or arms are superposed one upon the other or side by side against the flat face of a guide b^5 and connected therewith by a clamping-bolt c , passed through the slots a' and the slot b^7 of the guide, the flat-sided head c' of the bolt resting on and being locked from rotation by the locking-shoulder b^6 . A washer c^2 is slipped over the opposite end of the bolt and against the adjacent wire-supporting member, and then a nut c^3 is set upon the bolt, clamping the group of members together and to the guide. The lower ends of the bodies a project below the base through the slot b^4 therein, as clearly shown in Figs. 2 and 4. When the nut is slackened, the entire group can be adjusted toward or away from the center of the base to the desired position, and the several members of the group can be individually adjusted angularly about the clamping-bolt as a center and longitudinally by virtue of the slots a' in their bodies.

By means of the group and individual adjustments the wire-supporting members or arms can be adjusted to practically any shape of frame, simple or complex, and having a straight, bell, round, or flat crown and for various kinds of brims and coronets.

In Figs. 1 and 2 the device is set to form a hat-frame of the shape shown separately in Fig. 6 and the head-wire h is supported by an arm a^{20} of each group, inclined inward toward the center of the base and having the

proper longitudinal adjustment, the head-wire in Fig. 2 being shown by a double dotted line between the members a^{20} and in section in the wire-seats. A second member, as a^{22} , of each group is properly adjusted to support the crown-wire c , the latter being indicated in Fig. 2 in a manner similar to the head-wire h .

Referring to the drawings, it will be manifest that the hat-frame has a bell crown with a more abrupt bell at the front, and it will be seen from Fig. 2 that the crown-wire-supporting members a^{22} are located outside of and pass up beyond the head-wire h when the latter is in position.

The arrangement just referred to is of the utmost importance, as it enables the frame to be lifted off when completed without bending or distorting it and with very slight collapsing of the base, which manifestly is secured by tipping up the base portion b' .

In a bell crown the area inclosed by the crown-wire is greater than that inclosed by the head-wire; but by making the supports for the crown-wire pass outside of the head-wire supports the completed crown can be lifted off without any interference of the head-wire with the supports for the crown-wire.

The hat-frame shown in Fig. 1 and partly in Fig. 2 has its brim turned up in coronet form, the round-and-round wires thereof being indicated at 1, 2, and 3, the coronet being brought up very straight at the back and close to the crown, so that the group containing the members a^{24} , a^{26} , and a^{28} (shown at the left, Fig. 2) are adjusted to bring their wire-seats almost directly above each other to accommodate the shape. It will be understood that in the other groups the supporting members for the wires 1, 2, and 3 will be adjusted vertically and angularly to correspond with the height and flare of the coronet adjacent thereto. Where the coronet is more open or flaring, as at the front, the members of the groups at the right, Fig. 2, which support the wires 1, 2, and 3, will be correspondingly set.

It will be apparent that by the great adjustability of the individual members of the several groups and by the group adjustment practically any conceivable shape of hat-frame can be formed, and as so little collapsing movement is required to free a portion of the completed frame the latter can be readily removed no matter how complex its shape.

In setting the device a hat-frame made up by the designer is applied, and by slightly loosening the clamping devices the groups bodily and the individual members thereof can with a little pressure to overcome friction be adjusted to engage the various round-and-round wires of the brim, after which the clamping devices are tightened. The base is then collapsed, the model-frame removed, and the base permitted to resume its normal position, when it is ready for use in making other frames to correspond to the model.

To make an attractive frame, it is desirable that the fore-and-aft wires f , Fig. 1, shall lie in planes radiating from a common center, and to get such a starting-point I prefer to erect a post b^{10} on the pedestal B and extended above the base, as shown in Figs. 1, 3, and 4, the post being omitted in Fig. 2. By leading the fore-and-aft wires over the upper end of the post and parallel to the guides b^5 such wires will have a common crossing-point and will radiate therefrom in vertical planes.

I have not indicated any fore-and-aft wires in Fig. 2, as they would tend to confuse the same, and while I have designated different supporting members, as a^{20} a^{22} — a^{28} , it will be understood that they are all made substantially alike and as described in detail hereinbefore.

With some shapes of frames it is unnecessary to use all of the members of a group, this being illustrated in Figs. 3 and 4, wherein the device is set for a frame, such as shown in Fig. 7. This frame has a substantially circular head-wire h^x , supported by the members a^{30} of the several groups, and an elongated sharply-elliptical crown-wire c^x , supported by the members a^{32} , the ends of the crown-wire projecting at back and front beyond the head-wire. This shape calls for only two members of a group and is illustrated to show the varied range of the apparatus, the several fore-and-aft lines f^x connecting the head and crown wires.

Referring to Fig. 5, it will be seen that the wire-supporting members secured to a single guide are divided into two groups, one of three and the other of five members, the mode of clamping the members being precisely such as has been described and the construction of individual members being that already referred to. In some cases it may be desirable to use this double grouping to facilitate making a frame of peculiar shape; but it of course involves an additional clamp for each group added.

The construction and arrangement herein shown and described may be varied or modified in different particulars by those skilled in the art without departing from the spirit and scope of my invention.

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

1. In a device for forming wire hat-frames, a base, a plurality of groups of supporting members mounted thereon and separately adjustable bodily toward and from its center, to support the round-and-round wires during the formation of a hat-frame, and means to vary the relative positions of the several members of a group.

2. In a device for forming wire hat-frames, a base, a plurality of groups of supporting members mounted upon and separately movable bodily thereon, to support the round-and-round wires of a hat-frame, each group com-

prising a series of members angularly and longitudinally adjustable with relation to each other, and clamping means for and common to all the members of a group.

3. In a device for forming wire hat-frames, a base, a plurality of groups of supporting members mounted upon and separately movable bodily thereon, each group comprising a series of relatively movable members adapted to support the round-and-round wires of a hat-frame, and clamping means to prevent individual movement of the members of a group and also to maintain the group fixed with relation to the base.

4. In a device for forming wire hat-frames, a base, supporting members for the round-and-round wires of a hat-frame, arranged in groups upon and around the center of the base, each group containing a plurality of similar, individually-adjustable supporting members, and means to maintain the several members of a group in individually-adjusted position.

5. In a device for forming wire hat-frames, a collapsible base, a plurality of groups of members mounted thereon and separately movable toward and from its center, to support the round-and-round wires of a hat-frame, and means to fixedly hold each group in adjusted position upon the base.

6. In a device for forming wire hat-frames, a base, a plurality of groups of elongated members mounted thereon around its center to support the round-and-round wires of a hat-frame, each member having at its upper end a wire-seat provided with an entrance at its outer side, and means to maintain the members of a group in relative angular and longitudinal adjustment.

7. In a device for forming wire hat-frames, a base having a series of upright, elongated guides thereon substantially parallel to lines radiating from the center of the base, a group of wire-supporting members for each guide, each group comprising a plurality of individually-movable members, and means to clamp each group in adjusted position upon the guide.

8. In a device for forming hat-frames, a base having a series of slots extending outward from its center, elongated wire-supporting members arranged in groups and having their lower ends extended through the slots, a group for each slot, and means to connect each group with the base and prevent collective or individual movement of the members of such group.

9. In a device of the class described, a base having a plurality of upturned guides extended outwardly from its center and each provided with a longitudinal slot, a group of elongated, longitudinally-slotted wire-supporting members located side by side adjacent each guide, and means, including a clamping-bolt extended through the slots of the members of each group and of the adjacent guide,

to clamp the group to the latter and also hold the several members of the group from individual movement.

10. In a device of the class described, a base, 5 groups of wire-supporting, elongated arms mounted thereon and bodily movable toward and away from the center of the base, each arm being made as a flat, elongated and longitudinally-slotted metallic strip having a 10 wire-seat at its upper end, the arms of a group being superposed one upon another, and a clamping-bolt extended through the slots of the arms of a group, to hold them in vertically and angularly adjusted relative position.

11. In a device of the class described, a base, 15 a series of wire-supporting members arranged in groups around the center thereof, each member having at its upper end a wire-seat with an elongated entrance at its outer side, a 20 guide-shelf below and extended outward beyond the entrance, and a curved lip overhanging said shelf and forming the upper side of the entrance.

12. In a device of the class described, a base, 25 a series of wire-supporting members arranged in groups around the center thereof, each member consisting of a flat, elongated metallic strip having an enlarged head provided with a notched outer edge to form a wire-seat, and 30 a guide-shelf below and extended outward beyond the entrance of the notch.

13. In a device of the class described, a base having a series of elongated slots extended outward from its center, and upturned, longitudinally-slotted guides adjacent each slot, 35 each guide having a locking-shoulder below its slot, a group of wire-supporting, longitudinally-slotted arms for each guide, said arms being individually adjustable longitudinally 40 and angularly, a clamping-bolt passed through the slots of the guide and the adjacent group of arms and provided with a head to cooperate with the locking-shoulder of the guide and a 45 nut on the opposite end of the bolt, to clamp the group of arms together and upon the guide, the lower ends of the groups of arms extending through the slots in the base.

14. In a device of the class described, a circular base, a plurality of circularly-arranged 50 groups of wire-supporting arms mounted thereon and movable independently toward and from its center, each group comprising a series of longitudinally-adjustable arms arranged side by side and angularly and separately movable about a common center, and 55 means to maintain the arms of a group in adjusted position.

15. In a device of the class described, a cir-

cular, collapsible base, a plurality of circularly-arranged groups of elongated wire-supporting arms mounted thereon and movable 60 bodily toward and from its center, each group comprising a series of longitudinally-adjustable arms angularly and separately movable about a common center, and common means 65 to maintain the arms of a group in adjusted position and retain the group fixed with relation to the base.

16. In a device of the class described, means to support the head-wire of a hat-frame, and 70 a series of crown-wire supports lying outside of and extended past the head-wire when the latter is positioned.

17. In a device of the class described, a base, a series of individually-adjustable members to support the head-wire of a hat-frame, 75 and a series of crown-wire supports connected with the base and individually adjustable, and extended upward from the base outside of and past the points of support for the head-wire. 80

18. In a device of the class described, a series of members to support the head-wire of a hat-frame, a series of crown-wire-supporting members adapted to pass outside of the 85 points of support for the head-wire, and extended above the same and means to temporarily collapse the supporting members to facilitate removal of a hat-frame therefrom.

19. In a device of the class described, a base, a series of head-wire-supporting members arranged around the center of the base and 90 individually adjustable toward and from the same, to vary the shape and size of the head-wire, and a series of crown-wire-supporting members extended upward from the base, passing outside of and beyond the points of support for the head-wire. 95

20. In a device of the class described, a base, a series of head-wire-supporting members arranged around the center of the base and 100 individually adjustable toward and from the same, to vary the shape and size of the head-wire, a series of crown-wire-supporting members extended upward from the base and passing outside of and beyond the points of support for the head-wire, the crown-wire-supporting members being individually adjustable, 105 and means to prevent movement of the wire-supporting members when adjusted.

In testimony whereof I have signed my name 110 to this specification in the presence of two subscribing witnesses.

WINTHROP M. JAMESON.

Witnesses:

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