

No. 775,174.

PATENTED NOV. 15, 1904.

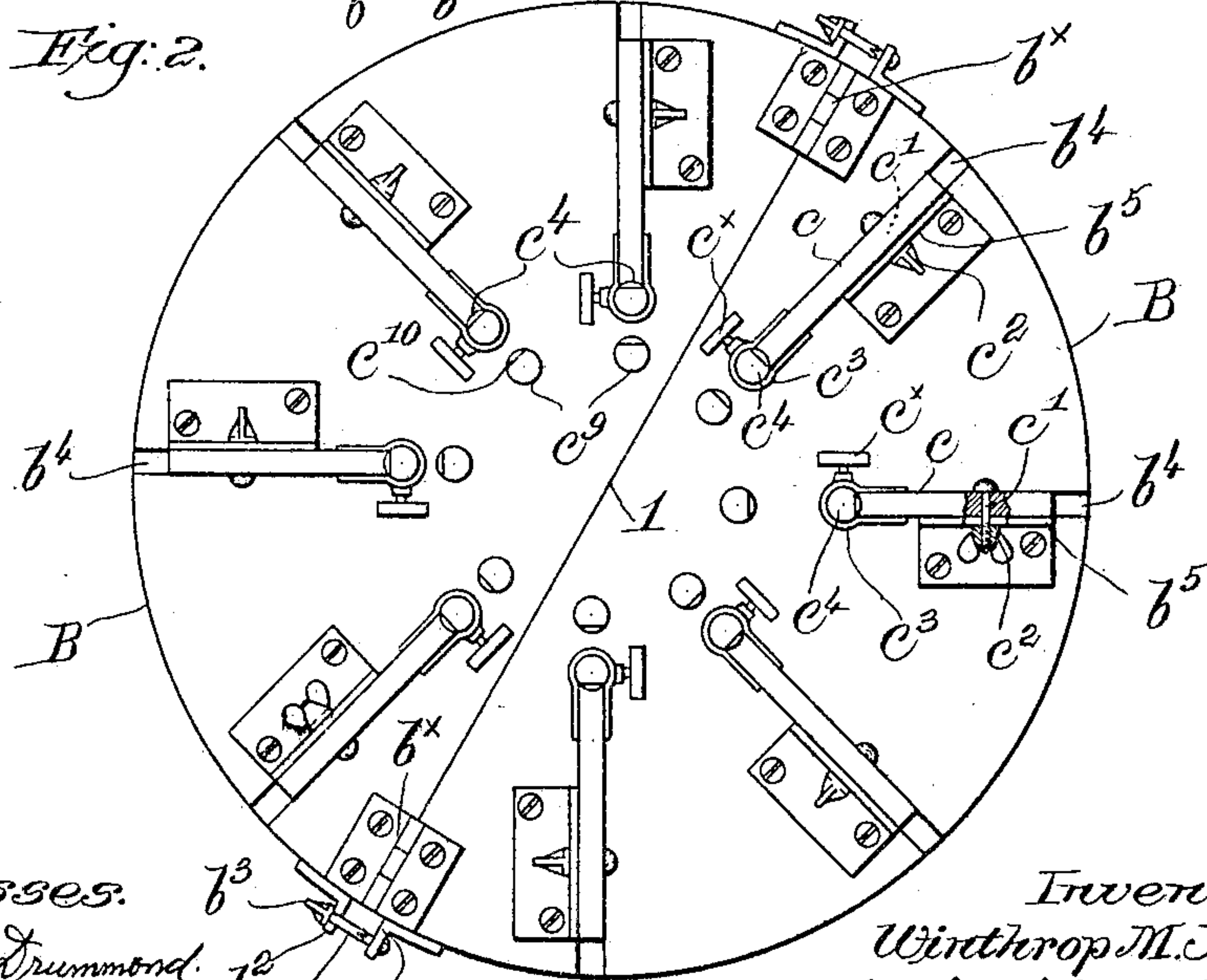
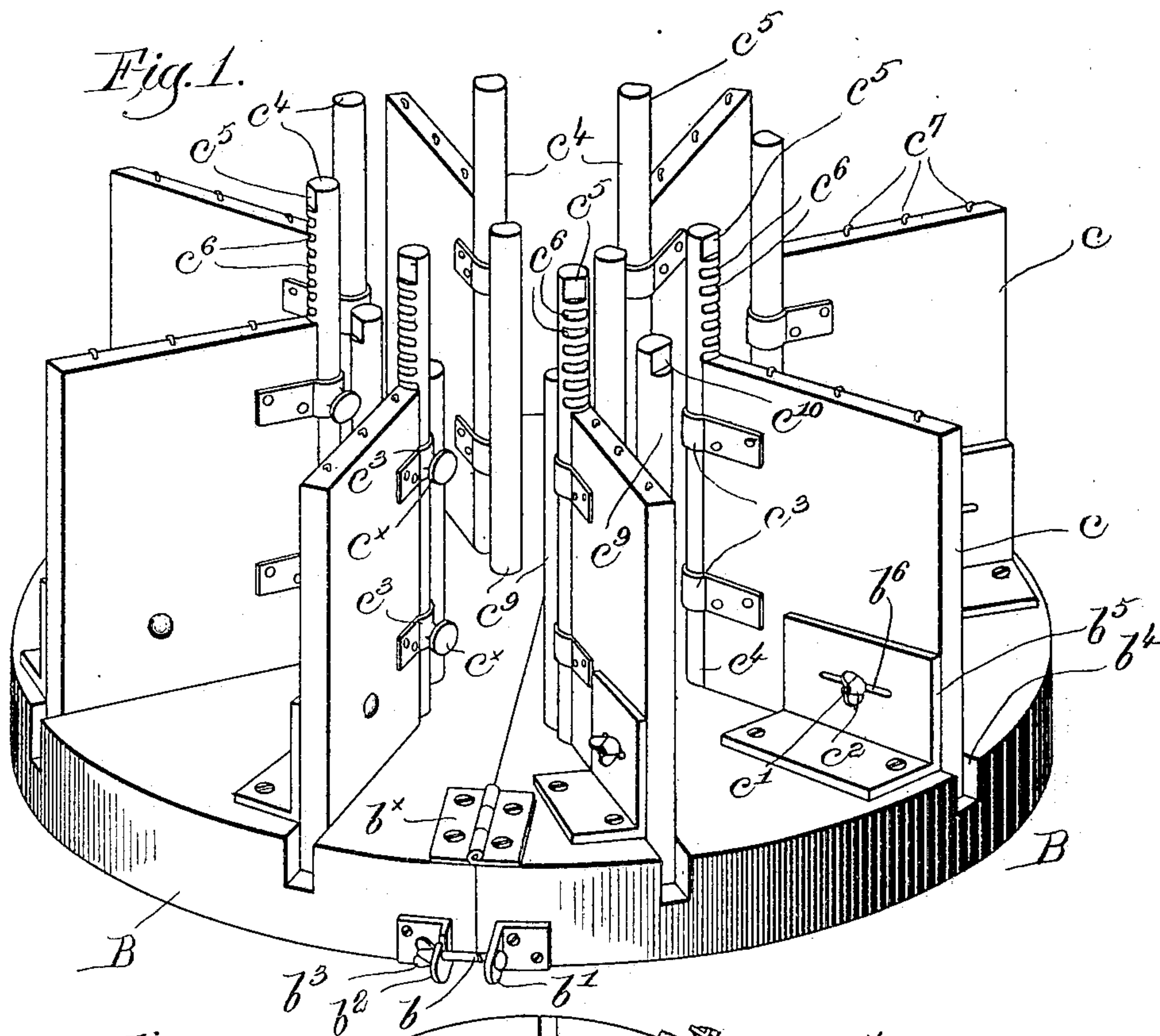
W. M. JAMESON.

DEVICE FOR FORMING WIRE HAT FRAMES.

APPLICATION FILED JUNE 23, 1904.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses.

Thomas Drummond.  
Warren D. Orew.

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Winthrop M. Jameson,  
by Darby & Gregory.  
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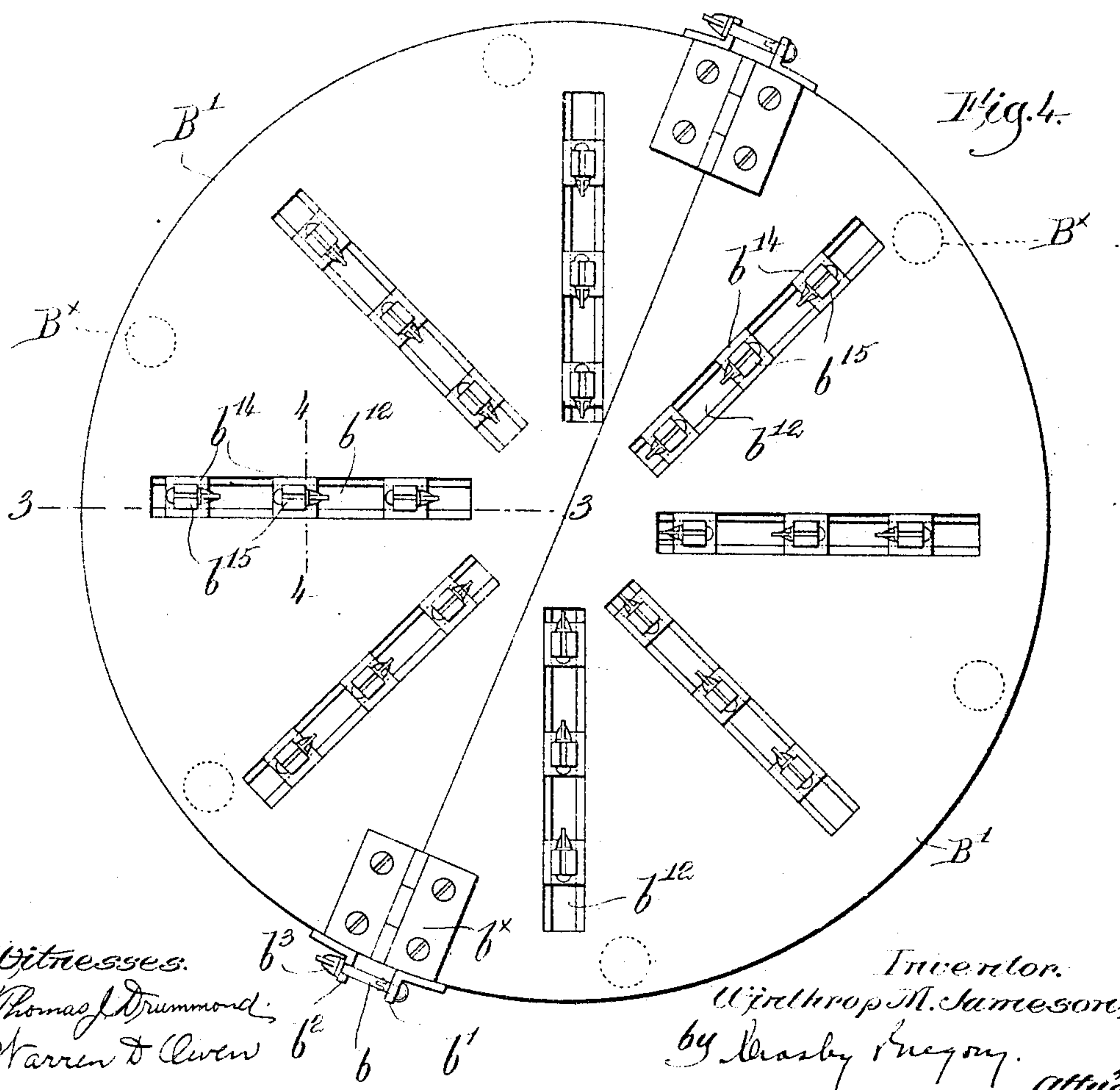
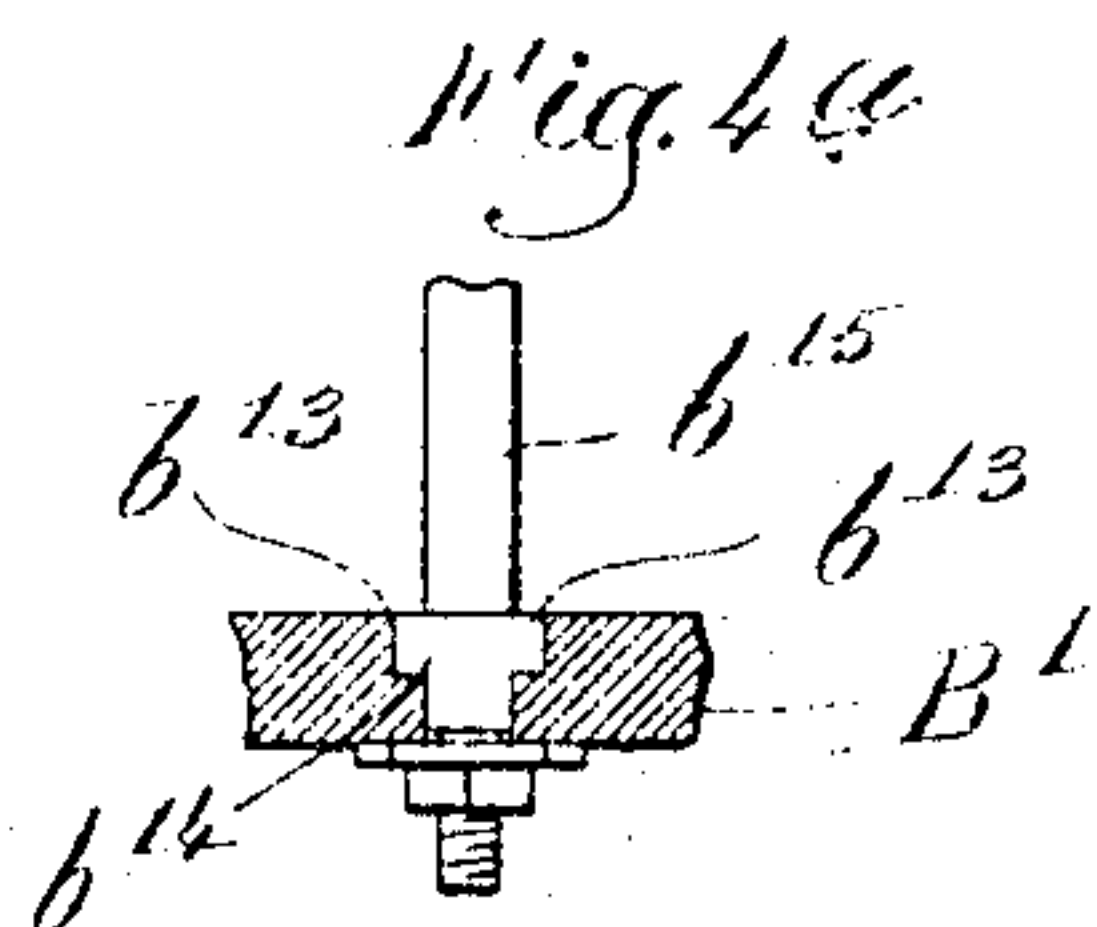
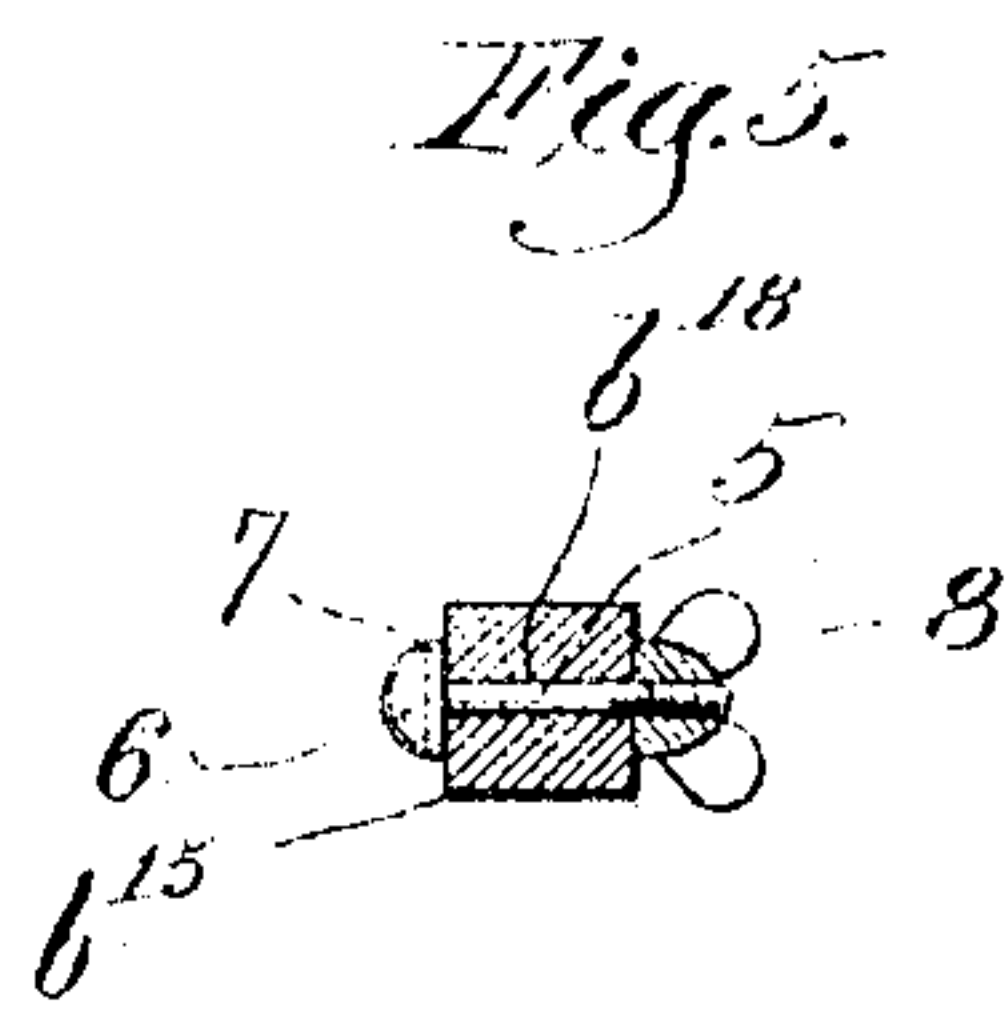
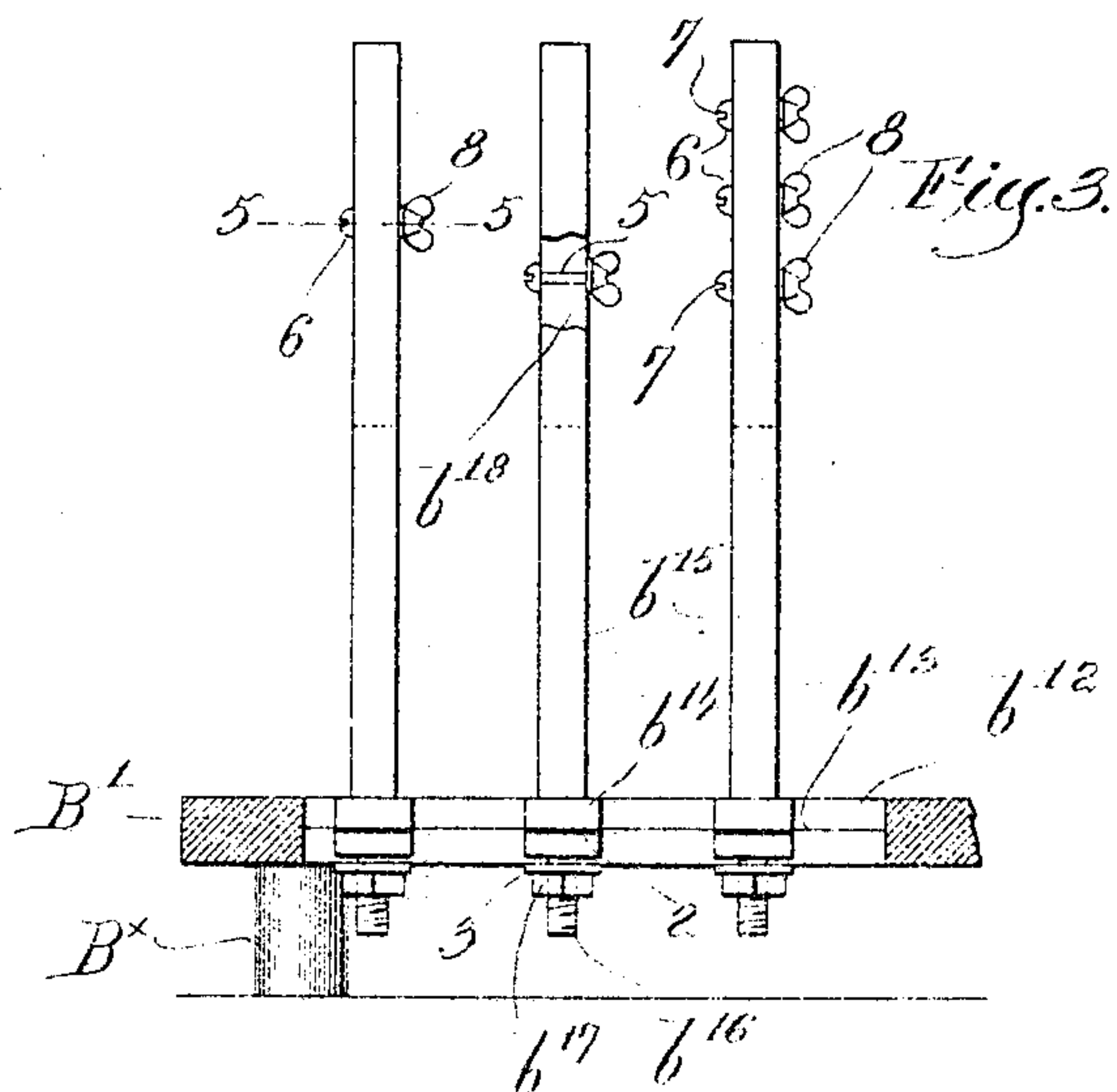
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3 SHEETS—SHEET 2.



Witnesses.  
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3 SHEETS—SHEET 3.

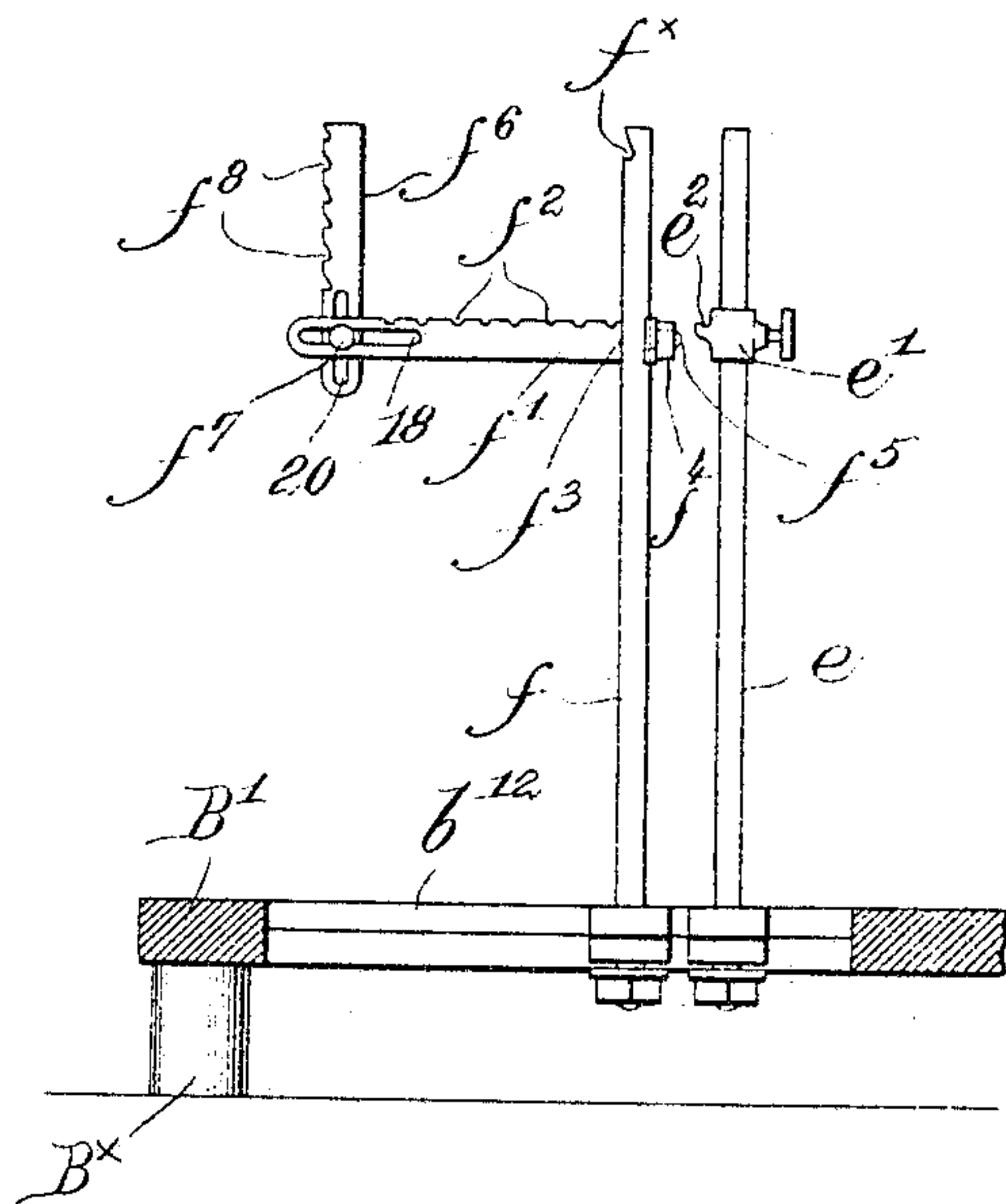
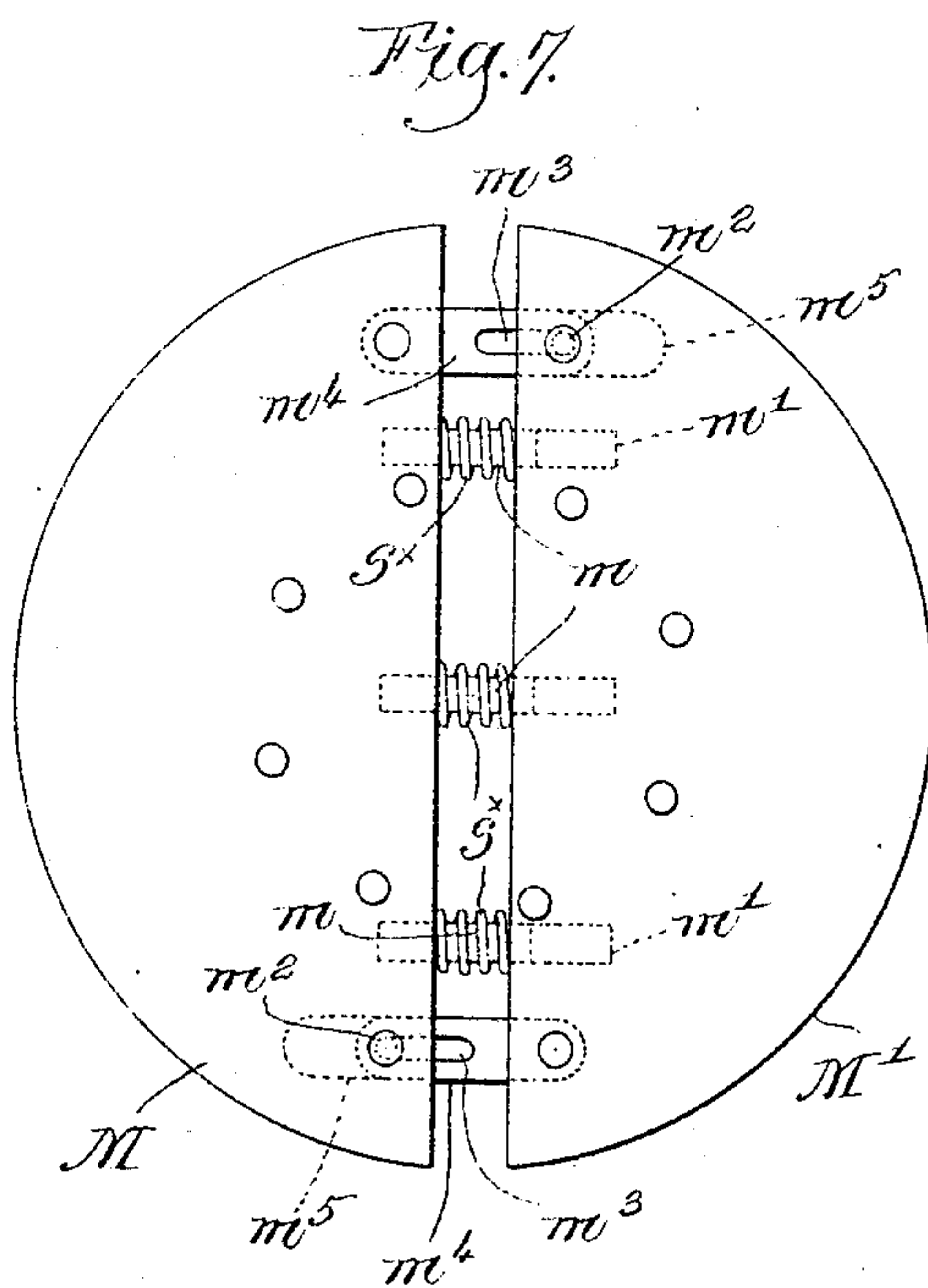
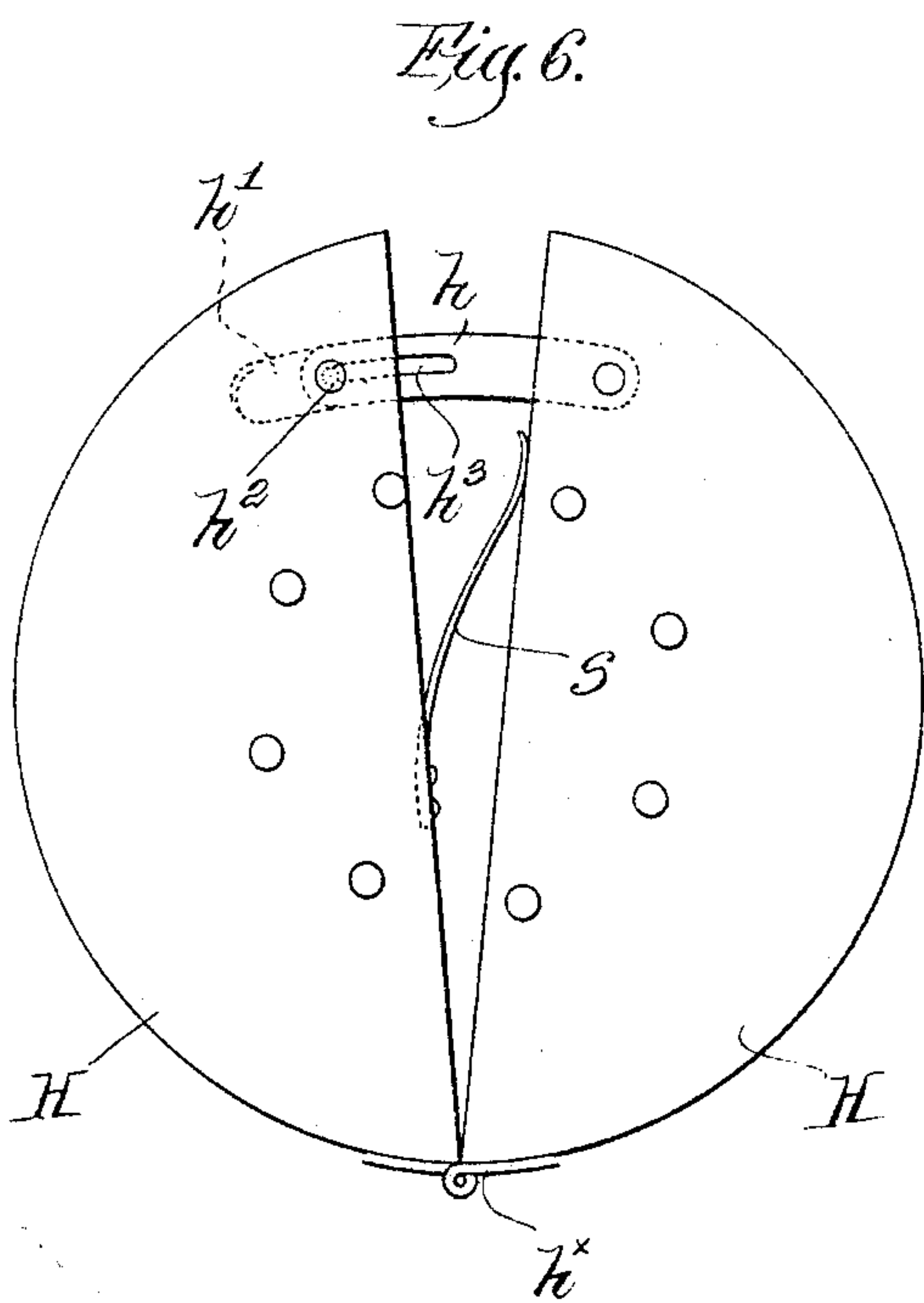


Fig. 8.



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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. 775,174, dated November 15, 1904.

Application filed June 23, 1904. Serial No. 213,783. (No model.)

*To all whom it may concern:*

Be it known that I, WINTHROP M. JAMESON, a citizen of the United States, and a resident of 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 novel device for forming so-called "twisted-wire" hat-frames for ladies' hats whereby the construction of the frame is greatly facilitated and the labor thereof diminished and whereby the removal of the completed frame can be accomplished quickly and easily without any distortion or bending thereof.

In accordance with my invention the means for detachably supporting the foundation-wires of the frame are rigidly connected with a collapsible base or stand so constructed and arranged that when the hat-frame is completed the collapsing of the base instantly releases the frame from the supporting means, so that said frame can be easily lifted off.

These and other 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 perspective view of a device for forming wire hat-frames embodying one form of my present invention, the apparatus being in readiness for the formation of either a straight or a bell crown hat-frame. Fig. 2 is a top or plan view thereof. Fig. 3 is a partial sectional view on the line 3 3, Fig. 4, of a modified form of the supporting means for the round-and-round or foundation wires for the hat-frame. Fig. 4 is a top or plan view thereof. Fig. 4<sup>a</sup> is a sectional detail on the line 4 4, Fig. 4. Fig. 5 is an enlarged horizontal section through one of the upright supporting members on the line 5 5, Fig. 3, the wire holder being shown partly in plan. Fig. 6 is a plan view of another form of collapsible base embodying one part of my present invention. Fig. 7 is a similar view of yet another form of the collapsible base, and Fig. 8

is a detail in section and elevation of adjustable means to support the foundation-wires of the brim or a coronet.

I have herein shown several forms of a collapsible base, and in Figs. 1 and 2 the base is shown as composed of two semicircular members B B, of thick wood, or metal, if desired, pivotally connected by hinges  $b^x$  on their upper faces adjacent their straight edges. Suitable locking or retaining means is provided to normally hold the base in extended position, and in Figs. 1 and 2 such means comprises a swinging latch  $b$ , pivoted on an ear  $b'$  on the periphery of one of the members B to cooperate with a notched ear or keeper  $b^2$  on the other member, said ears being attached near the bottom of the base and one at each end of the parting-line of the two base members. I preferably screw-thread each latch  $b$  to receive a thumb-nut  $b^3$ , so that any looseness can be taken up when the base is open or extended to hold the same firmly in such condition. To collapse the base, the latches are swung out of engagement with their keepers  $b^2$ , and one member B may be swung upward relatively to the other member.

A series of grooves  $b^4$  are formed in the upper face of the base, one side wall of each groove being radial to the center 1 of the base, as will be manifest from Fig. 2, and adjacent the opposite side of each groove an upright guide-plate  $b^5$  is rigidly secured to the base member, said guide-plates having horizontal elongated slots  $b^6$  therein. An upright wing  $c$  is mounted in each groove  $b^4$  and is slidable therein toward and from the center of the base, said wing being held upright and also in radially-adjusted position by a lateral threaded pin  $c'$ , extended loosely through the slot of the adjacent guide-plate  $b^5$  and receiving on its end a clamp-nut  $c^2$ . Straps  $c^3$ , secured to each wing at its inner upright edge, receive and support a post  $c^4$ , which extends above the top of the wing and is vertically adjustable relative thereto in the straps, a set-screw  $c^x$  in one or both of the straps holding the post in vertically-adjusted position. Each post has its upper end provided on its outer side with a slightly-undercut notch  $c^5$ , as clearly shown in Fig. 1, to receive the top foundation



or round-and-round wire of the hat-frame. Below the notch  $c^5$  a series of horizontal notches  $c^6$  are made in the post to support intermediate foundation-wires of the crown, and by using the proper notches in connection with the vertical adjustment of the posts  $c^4$  a crown of any desired depth may be formed and with a suitable number of intermediate wires. The bottom wire of the crown will be held in the notch adjacent the top of the wing  $c$ , and each wing is shown as provided on its top edge with several pins  $c^7$  to hold in position the foundation-wires of the brim.

It will be understood that the construction illustrated in Fig. 1 is arranged for the formation of a hat-frame with a flat brim. Curved brims can be made by using wings having their upper edges shaped to the curvature of the brim, as will be manifest.

By reference to Fig. 2 it will be seen that the supporting means for the foundation-wires of the hat-frame are circularly arranged upon the base and that the diameter of the crown can be varied by the radial adjustment described. If a bell-crown is to be made, the top foundation-wire of the crown will be supported in the notches  $c^5$  of the posts  $c^4$ , as described; but the bottom wire will be supported in notches  $c^{10}$  in posts  $c^9$ , fixedly mounted on the base inside of the posts  $c^4$ , and the brim-wires will be sustained by the wings, as before. When the various foundation-wires have been united by twisting around them the "fore-and-aft" wires, as they are termed, the hat-frame is completed, and in order to remove it the base is collapsed, as has been described. This causes the supporting members on one part of the base to be tilted inward toward the members on the other part of the base, so that the foundation-wires of the hat-frame can be readily lifted out of the notches in the posts and over the pins  $c^7$  on the wings. When one side of the hat-frame has been thus released, the other side can be lifted off without any bending or distortion of the shape of the frame, whether a straight or a bell crown.

In Figs. 3 and 4 the general construction of the base so far as its collapsibility is concerned is substantially as has been described; but this structure is more particularly designed to be made of metal. The two semi-circular halves  $B'$   $B'$  are hinged together at  $b^x$ , as before, and similar locking means is shown in Fig. 4 to hold the base extended; but the base members are supported on stout rigid depending legs  $B^x$ . A series of slots  $b^{12}$  are made in the base members, one side of each slot being radial to the center of the base, the parallel ledges  $b^{13}$ , Fig. 4<sup>a</sup>, at each side of the slot cooperating with the shoulders 2 of an enlarged foot  $b^{14}$  on an upright post  $b^{15}$ , projecting above the base. The post has a threaded shank  $b^{16}$  depending from the foot below the base to receive a washer 3 and a

clamping-nut  $b^{17}$ , Figs. 3 and 4<sup>a</sup>, the nut when set up holding the foot firmly clamped upon the ledges  $b^{13}$ , as will be manifest. In Figs. 3 and 4 I have shown three of such posts in each of the slots  $b^{12}$ , and it will be obvious that they may be adjustably held at such distances apart as may be desired, and a greater number of posts may be grouped if convenient or necessary to the work. Each of the posts is slotted longitudinally, as at  $b^{18}$ , and one or more vertically-adjustable wire-holders are mounted therein.

Referring to Fig. 5, the wire-holder is shown as a threaded bolt 5, extended loosely through the slot and having its head 6 provided with a transverse notch 7 to receive the foundation-wire, a clamping-nut 8 serving to clamp the holder in position. The flat face of the head 6 bears against the outer face of the post and the clamping-nut against its opposite inner face, as will be obvious from an inspection of Figs. 3 and 4. In Fig. 3 the inner post has three of such holders, and the other posts have one each. The top and bottom wires of the crown of the hat-frame will be supported in the notches of the upper and lower holders on the innermost post, and the brim-wires will be supported in the notches of the holders on the other two posts of each group, and by vertically adjusting such holders the brim may be given any desired curvature. So, too, if a coronet is to be made two or more additional holders could be applied to the center post of each group for the purpose.

In Fig. 8 I have shown a modification so far as relates to the upright posts, they being set in the slots  $b^{12}$  of the base in groups of two, the inner post  $e$  of each group being cylindrical and having a vertically-adjustable collar  $e'$  thereon, provided with a notched lug  $e^2$ . The outer post  $f$  is preferably rectangular in cross-section and is longitudinally slotted to receive an outwardly-extended arm  $f'$ , having a series of notches  $f^2$  in its upper edge, the arm being shouldered at  $f^3$  to rest against the outer face of the post, a nut  $f^4$  on a threaded extension  $f^5$  of the arm clamping the latter in adjusted position on the post. A notch  $f^x$  is made in the upper end of the post  $f$  to receive the top round-and-round wire of the crown of the hat-frame, and for a bell crown the bottom wire of the crown is supported by the lug  $e^2$ . The brim-wires are supported in some of the notches  $f^2$ , and for a coronet I have provided a short arm  $f^6$ , connected with the long arm by a clamp-screw  $f^7$ , the shank of which passes through elongated slots 18 and 20 in the long and short arms, respectively, the outer edge of the short arm having notches  $f^8$ . By this connection the short arm can be adjusted vertically, horizontally, and angularly, the coronet-wires being supported by the notches  $f^8$ . The lower ends of the posts are shaped as shown in Figs. 3 and



4<sup>a</sup> and are adjustable in the slots  $b^{12}$  of the base, as has been previously described. It will be readily understood from the foregoing description, taken in connection with the drawings, that the collapsing of the base enables the operator to readily remove the completed hat-frame. When a straight crown is to be made, the inner posts  $e$  of the groups will not be used, said posts serving the same purpose as the stationary inner posts. (Shown in Figs. 1 and 2.)

It may be stated at this point that by making the radiating guideways, such as grooves or slots, in the bases with one side of each adjacent a true radius the operator is afforded a guide when laying on and securing the fore-and-aft wires to the round-and-round or foundation wires, so that at the top of the crown all the fore-and-aft wires cross at a common point above the center of the base.

The collapsible base may be made in a large number of ways, and in Figs. 6 and 7 I have shown two forms in which the base may be constructed with the collapsible feature.

Referring to Fig. 6, the two parts or members H H are each less than a complete semicircle; but when extended their periphery is circular, the parts being joined, as by a hinge  $h^x$ , at one end of their straight edges. A segmental guide  $h$ , rigidly secured to one member near the other end of its straight edge, enters a correspondingly-shaped recess  $h'$  in the other member of the base, and a stop-pin  $h^2$  in said member passes down through an elongated slot  $h^3$  in the guide. A stout leaf-spring  $s$ , secured at one end to the straight edge of one members H, bears at its free end against the straight edge of the other member to normally separate the members and retain them in the extended position shown. The pin  $h^2$  then limits the spring-induced separation of the members H, which latter will be provided with supporting means for the foundation-wires of the hat-frame, such means being omitted to more clearly show the base and the construction thereof. The supporting means may, if desired, be made as shown in Figs. 1 and 2 or as in Figs. 3 and 4, care being taken in either case to position the upright posts in such manner that they may be adjusted toward and from the center of the base without interfering with the collapsing of the base.

Referring to Fig. 7, the two halves M M' of the base are large sectors of a circle, but each less than a semicircle, one of said members, as M', having a series of sockets  $m'$  at right angles to its straight edge to loosely receive and guide pins  $m$ , rigidly secured to the base member M and projecting from its straight edge. Strong spiral springs  $s^x$  are coiled around the pins  $m$  between the opposed edges of the base members M M' to normally maintain them extended, the extension being limited by stop-pins  $m^2$ , which enter slots  $m^3$  in

ears  $m^4$ , rigidly secured to the two members. The ears are reversed, one being rigidly secured to each base member and sliding into a pocket  $m^5$  in the other member when the base is collapsed. To collapse the base, the members M and M' are pressed toward each other, compressing the springs  $s^x$  in an obvious manner, so that the wire-supporting posts on one member will be moved far enough toward the posts on the other member to enable the completed hat-frame to be removed. Collapse of the base (illustrated in Fig. 6) is effected in a similar manner by closing together the separated divergent straight edges of the two members H H. This collapsing feature of the base is a great convenience in the work of the hat-frame maker, and when it is not desired to employ the adjustable wire-supporting means herein illustrated a series of circularly-arranged posts permanently fixed in the base may be employed — such, for instance, as shown in a pending application, Serial No. 208,713, filed by me the 19th day of May, 1904.

Various changes or modifications in the construction and arrangement of the device herein shown and described may be made by those skilled in the art without departing from the spirit and scope of my invention, and as I believe it is broadly new to provide a collapsible or contractible base for a hat-frame-forming device I desire it to be understood that the same is broadly claimed in connection with any suitable means for supporting the foundation-wires of a hat-frame in the process of constructing the same.

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 collapsible base, and upright members rigidly held thereon to support the crown and brim wires during the formation of a hat-frame.

2. In a device for forming wire hat-frames, means to support and position round-and-round wires of the frame, a collapsible base for and upon which said means is sustained, and means to normally maintain the base extended.

3. In a device for forming wire hat-frames, a group of upright members, means to hold round-and-round wires of the frame in relatively adjusted position on said members, a base comprising a plurality of movable members and on which said upright members are rigidly mounted, and means to normally prevent relative movement of the base members.

4. In a device for forming wire hat-frames, a base comprising a plurality of connected and relatively movable parts, means to normally hold them from movement, and a group of upturned, circularly-arranged members mounted on the base and provided with means to hold in position the round-and-round wires of the



frame, relative movement of the parts of the base releasing such wires from their holding means.

5 5. In a device for forming wire hat-frames, a collapsible base, a group of upturned, circularly-arranged members rigidly connected with and mounted upon the base, and means on said members to support wires at desired heights thereon.

10 6. In a device for forming wire hat-frames, a base, a group of upturned, circularly-arranged members mounted upon and radially adjustable on the base, to detachably support round-and-round wires of a frame, and means  
15 to rigidly connect said members and the base when the former are radially adjusted.

7. In a device for forming wire hat-frames, a base, a group of radially and independently adjustable, upright members mounted there-  
20 on, means to rightly connect with the base the said members when in adjusted position, and means on the members to detachably support the foundation-wires of a frame at desired heights.

25 8. In a device for forming wire hat-frames, a collapsible base, radially-adjustable means thereon to support the foundation-wires of a frame, and connections between the base and said means, to maintain the latter rigidly in  
30 place when in adjusted position.

9. In a device for forming wire hat-frames, a base, vertically and radially adjustable means thereon to detachably support the foundation-wires of a frame, and connections be-  
35 tween the base and said means to hold the latter rigidly in radially-adjusted position.

10. In a device for forming wire hat-frames, a collapsible base, a group of radially-adjustable, upright wire-supporting members there-  
40 on, means on said members to detachably hold the wires in vertically-adjusted position, and means to rigidly connect with the base said members when radially adjusted.

11. In a device for forming wire hat-frames,  
45 a circular, collapsible base, means to normally maintain it in extended position, a group of radially-movable, circularly-arranged upright posts mounted on the base, means to rigidly connect with the base said posts when  
50 adjusted, and holding means on the posts to

detachably sustain foundation-wires of a frame in position thereon.

12. In a device for forming wire hat-frames, a circular, two-part base, connections between the parts whereby one may be moved rela- 55 tively to the other, means to normally prevent such movement, and upright, wire-supporting posts radially adjustable on the base, and held at right angles thereto.

13. In a device for forming wire hat-frames, 60 a two-part base the parts of which are pivotally connected, means to normally maintain the parts in extended position, a group of radially-adjustable, upright posts thereon, means to rigidly connect the base and posts 65 when the latter are adjusted, and vertically-adjustable wire-holding devices on said posts.

14. In a device for forming wire hat-frames, a collapsible base, upright circularly-arranged and radially-adjustable posts thereon to de- 70 tachably support the crown-wires of a frame, and separate vertically and radially adjustable means carried by the base to support the foundation-wires of the brim or coronet of a frame. 75

15. In a device for forming wire hat-frames, a collapsible base, and means mounted there- on to support the foundation-wires of a hat- frame.

16. In a device for forming wire hat-frames, 80 a collapsible base, yielding means to normally maintain it extended in operative position, and means mounted on the base to temporarily and detachably support the foundation-wires of a hat-frame. 85

17. In a device for forming wire hat-frames, a collapsible, flat base having a circular periph- ery, and means mounted thereon to support the foundation-wires of a hat-frame, said means being arranged with reference to the 90 center of the base to permit the fore-and-aft wires to cross each other at a common point above the center of the base.

In testimony whereof I have signed my name to this specification in the presence of two sub- 95 scribing witnesses.

WINTHROP M. JAMESON.

Witnesses:

JOHN C. EDWARDS,

ELIZABETH R. MORRISON.

It is hereby certified that in Letters Patent No. 775,174, granted November 15, 1904, upon the application of Winthrop M. Jameson, of Cambridge, Massachusetts, for an improvement in "Devices for Forming Wire Hat-Frames," an error appears in the printed specification requiring correction, as follows: In line 20, page 4, the word "rightly" should read *rigidly*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 6th day of December, A. D., 1904.

[SEAL.]

F. I. ALLEN,  
*Commissioner of Patents.*