

No. 822,797.

PATENTED JUNE 5, 1906.

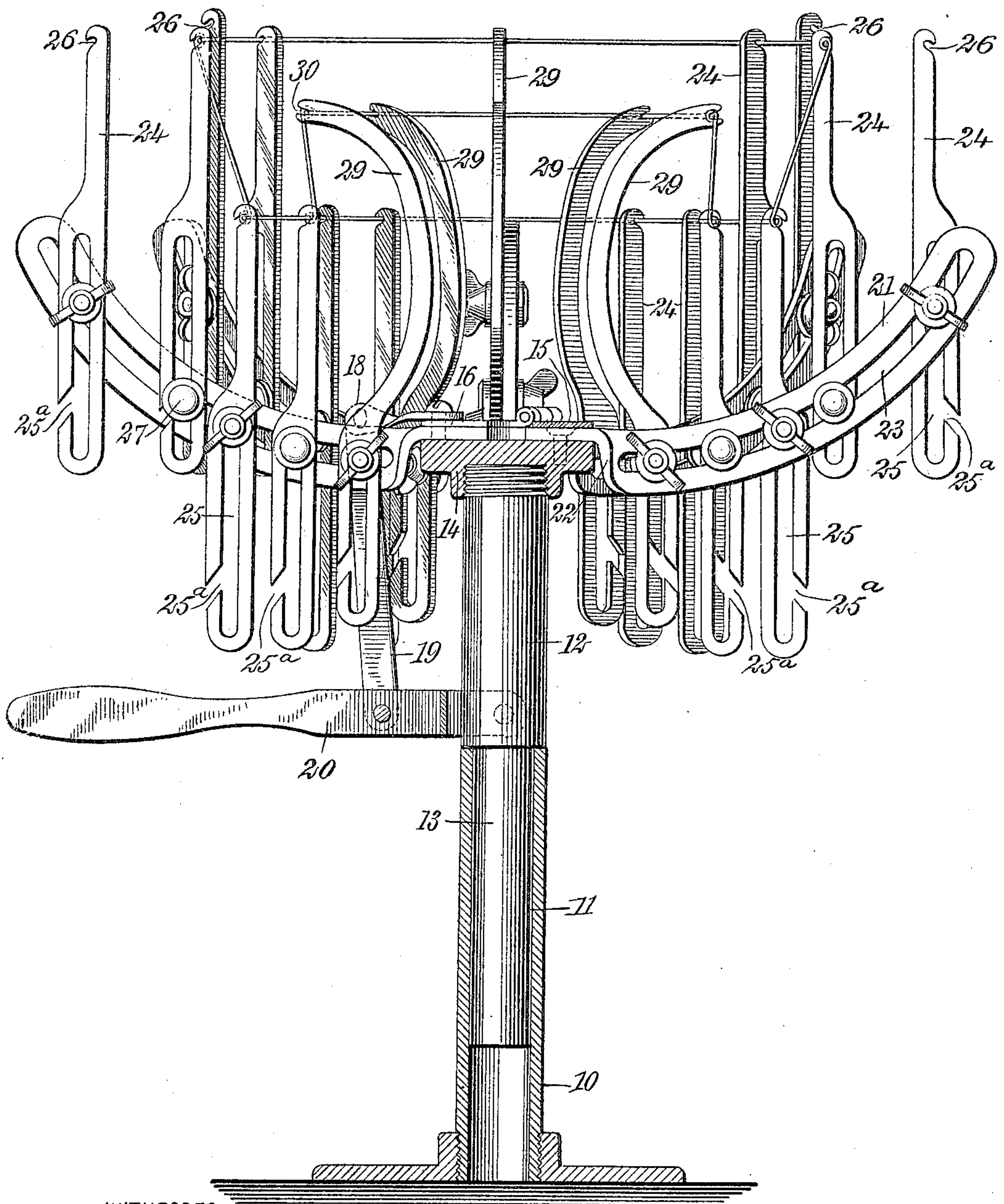
C. P. WILDENBERG.

HAT MACHINE

APPLICATION FILED NOV. 28, 1905.

3 SHEETS—SHEET 1.

Fig. 1.



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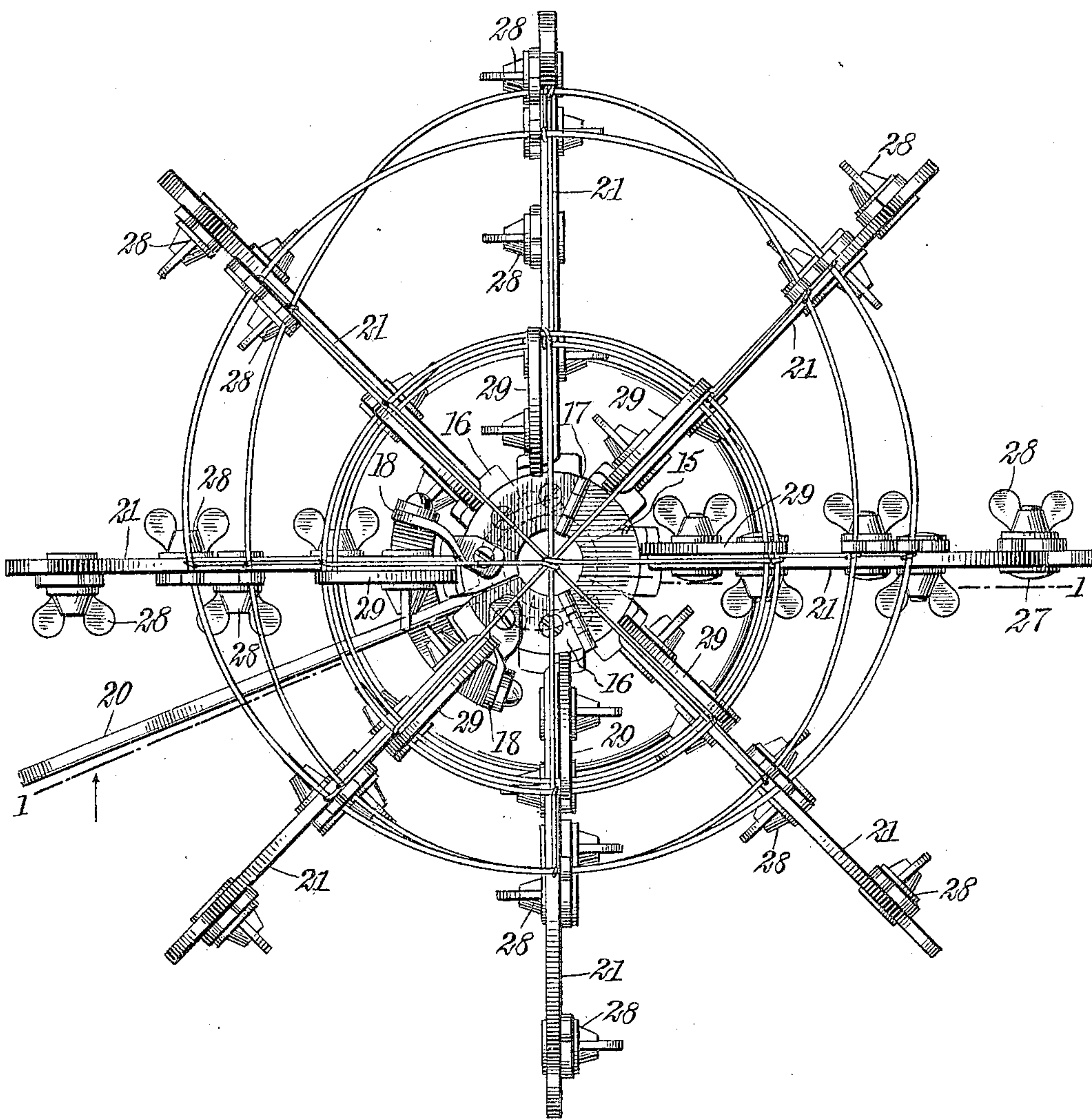
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3 SHEETS—SHEET 2.

Fig. 2.



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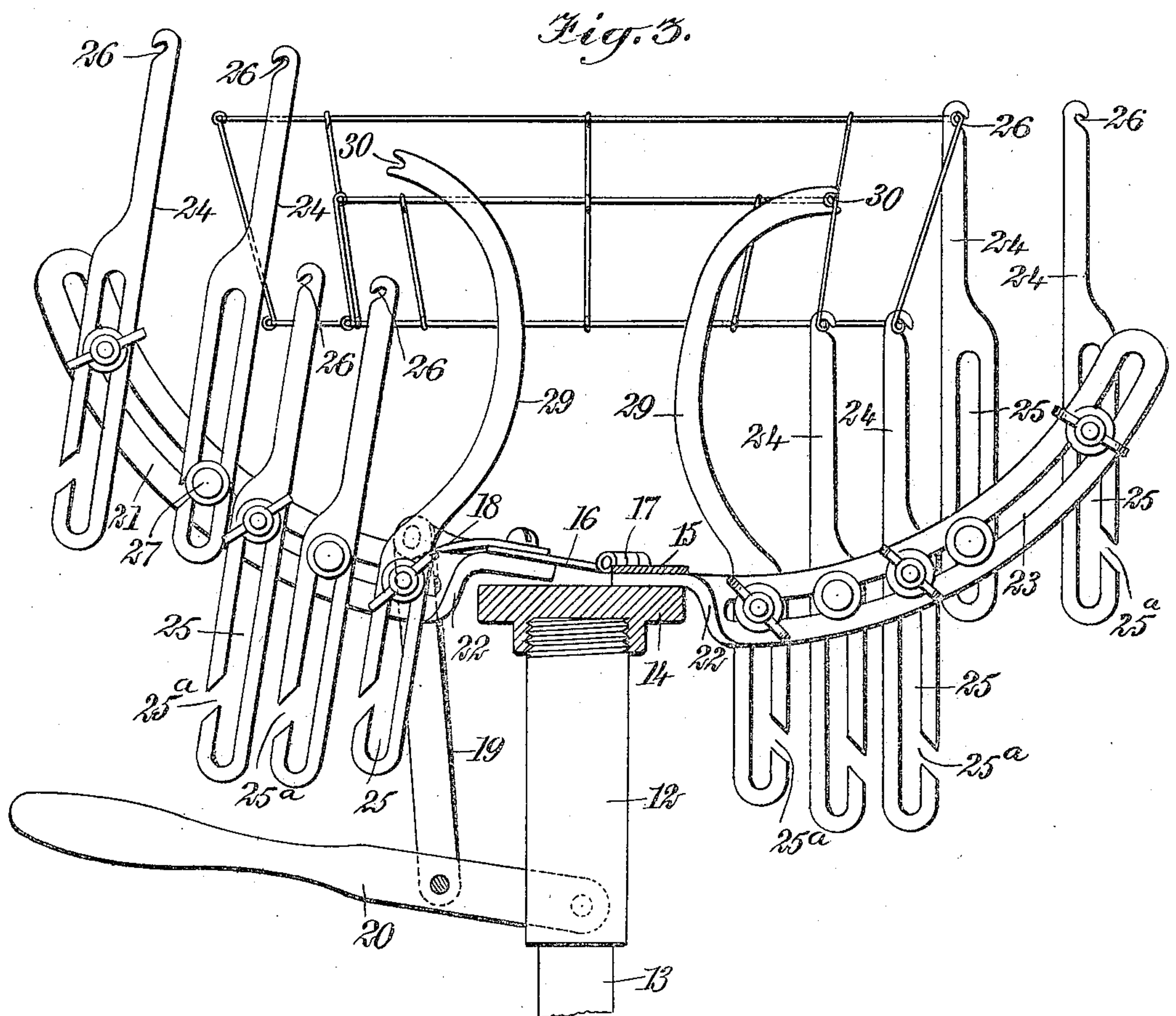
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UNITED STATES PATENT OFFICE.

CHARLES P. WILDENBERG, OF NEW YORK, N. Y.

HAT-MACHINE.

No. 822,797.

Specification of Letters Patent.

Patented June 5, 1906.

Application filed November 28, 1905. Serial No. 289,471.

To all whom it may concern:

Be it known that I, CHARLES P. WILDENBERG, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Hat-Machine, of which the following is a full, clear, and exact description.

My invention relates to a machine for use in supporting wires and shaping them in order to produce frames for ladies' hats.

The principal objects of my invention are to provide means whereby the several wires forming a part of a hat-frame can be conveniently and accurately supported by means of hooks even when the hat-frame is of unusual shape, having reëntrant portions, and to provide means for conveniently removing the hat-frames from the machine. In order to accomplish these results, I have introduced several improvements in the construction of machines of this character. As heretofore constructed these machines have usually been provided with a series of arms on which are mounted a plurality of wire-holding hooks, these hooks being secured to the arms in a single position and radiating therefrom to provide for holding the wires. This construction is objectionable, owing to the fact that the several hooks so located on an arm cannot be placed in the same plane. The several points of the hat-frame, which should be in vertical alinement, are placed on an incline. Also it is difficult to provide for locating the hooks when reëntrant angles are desired. These machines have also been so made that a part of the arms, with the hooks thereon, have been movable toward the others; but so far as I am aware they have not been heretofore so constructed that two or more sets of hooks have been movable toward each other or inwardly to detach them from the hat-frame.

The principal objects of my invention overcome the various objections mentioned above and further simplify and increase the efficiency of devices of this character.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional view on the line 1 1 in Fig 2, showing a hat-machine embodying the principle of my invention. Fig. 2 is a plan of the same, and Fig. 3 is a view similar

to Fig. 1 with the parts in a different position and with certain parts omitted.

I have shown a form of the invention in which a standard 10, having a socket 11, is provided with a support 12, having a rod 13 entering the socket, whereby the support can be rotated or swung around the rod as an axis. On this support is a head 14. This head is provided with a stationary plate 15 and with two or more movable plates 16. The movable plates are connected with the stationary plate by hinges 17 or the like, so that they can swing on a radial line toward the stationary plate. In order to provide for so swinging the removable plates, each one has an arm or projection 18, with which is pivotally connected a link 19, connected with a lever 20, which is pivoted on the support 12. The raising of the lever results in swinging the two plates 16 on their hinges inwardly, not only toward the plate 15, but toward each other. In the preferred form of the invention each of the plates 15 and 16 occupies about one-third of the surface of the top of the head. The object of so locating and operating these plates will be described below. Connected with each of the plates 15 and 16 are arms 21. Two or more of these arms are preferably mounted on each plate, and they are preferably spaced apart around the circumference of the head at substantially equal angles from each other. Each of the arms is provided with a projection 22, extending downwardly along the edge of the head 14 and is curved upwardly therefrom. Each one is also provided with a longitudinal slot 23, partaking of the shape of the arm. These arms are provided for the purpose of supporting a plurality of hooks 24. Each hook is provided with a slot 25, open, as at 25^a, near the lower end, and has a notch 26 at the upper end, provided with a slanting surface below it and adapted to hold the wires of the hat-frame. The hooks are mounted on the arms by means of a series of bolts 27, which are secured in position by means of thumb-nuts 28. In the preferable way of operating the device these hooks are mounted all on the same side of the arms; but the bolts are mounted in an alternating position, so that half the nuts appear on one side and alternate with the heads of the bolts. This is for the purpose of permitting the loosening and tightening of two hooks at the same time, one with the right hand and the other with the left hand, which

greatly assists the operation of forming a hat-frame on a machine of this character. It will be noticed that the hooks are all mounted on the same side of the arms, and consequently they are in alinement, and the disadvantage of disalinement mentioned above is done away with. Each slot 25 also has an inclined slot 25^a opening from its side, so that the hooks can readily be removed. This also permits the hooks to be held at all points by the bolts.

For the principal parts of a hat a series of straight hooks like those described are sufficient; but where a portion of the crown forms a reëntrant angle it is necessary that a hook at the rear or toward the center project beyond a hook in front of it. For this purpose I have provided a series of curved hooks 29. The lower parts of these hooks are the same substantially as the corresponding parts of the hooks 24; but the upper parts are provided with a long sweeping curve, so that one of the hooks 24 can be located at a point within said curved hook on a line nearer the center of the machine than the line between a notch 30 of the curved hook and the bolt by which it is supported on the arm. This provides for forming the hats in any desired shape, as it will be obvious that these curved hooks can be located in any position either extending in the direction indicated in the drawings or in the reverse direction, also that they can be placed at any point on the arms; but for ordinary purposes they are used near the head.

The operation of the machine is very simple, the plates 16 resting on the top of the head 14 in a horizontal position, the arms 21 projecting outwardly at substantially the same angle and curved upwardly in a corresponding manner. The hooks are arranged on the arms in whatever position may be necessary in order to form a hat-frame of the desired shape and secured in position by means of the thumb-nuts. The entire removal or the replacement of a hook is obviously a matter which can be accomplished with the greatest of convenience. The hat-frame is formed by passing the wires in the necessary manner around the machine and locating them in the notches of the hooks, and where it is bent to shape the lever 20 is raised, which raises both plates 16, moving them inwardly toward each other. This is an important feature, as heretofore the entire half of the machine was moved inwardly in those types which most closely approach the present type of machine and the hooks at the opposite ends of the movable plates did not move toward each other, and consequently if the hat were irregular in shape it was often necessary to spring the hat-frame in order to move it. In the present case it is obvious that all of the hooks of more than half of the hat are removed from the frame simultaneously by the

simple operation of the lever 20, and that consequently the hat-frame is entirely disengaged from the machine in the simplest possible manner. It will, moreover, be clear that by the use of the curved arms it is possible to form a hat-frame which is considerably higher than could be formed by the use of hooks of any particular size, or, if the height of hats to be formed is limited, shorter hooks can be used.

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

1. In a hat-machine the combination of a stand having a socket, a support mounted on the stand, a rod connected with the support and entering the socket, thereby permitting the support to turn on the stand, a head on the support, a plurality of movable plates on the head, a series of hooks supported by the plates and means for simultaneously moving said plates upwardly toward each other.

2. In a hat-machine the combination of a stand having a socket, a support mounted on the stand, a rod connected with the support, and entering the socket, thereby permitting the support to turn on the stand, a head on the support, a plurality of movable plates on the head, a series of hooks supported by the plates and means for simultaneously moving said plates, said means comprising a lever pivoted on the support, a link connected with said lever, and means on said plates for connecting them with the lever.

3. In a hat-machine the combination of a stand, a head rotatably mounted thereon, a plate mounted on the head, a plurality of plates movably mounted on the head, a series of hooks supported by the plates and means for simultaneously moving said plates toward each other.

4. In a hat-machine the combination of a support, a head on the support, a plurality of movable plates on the head, a series of hooks supported by the plates, and means for simultaneously moving said plates, said means comprising a lever pivoted on the support, a link connected with said lever, and means on each of said movable plates for connecting them with the lever.

5. In a hat-machine the combination of a head, a plurality of plates mounted on said head and divided from each other along radial lines at an angle to each other, one of said plates being fixed to the head and others pivotally mounted, and means connected with said movable plates for simultaneously moving them upwardly on their pivots toward each other.

6. In a hat-machine the combination of a head, three plates mounted thereon, said plates meeting at the center of the head and each one occupying substantially one-third of the area of the head, one of said plates being fixed to the head and the other two hinged

to the fixed plate on the opposite sides thereof, means on all the plates for supporting a series of hooks, and means for simultaneously swinging the movable plates on their hinges
5 toward each other.

7. In a hat-machine the combination of a rotatable head, a plurality of plates mounted on said head and divided from each other along radial lines, one of said plates being
10 fixed to the head and others pivotally connected with the fixed plate, and means connected with said movable plates for simultaneously swinging them about their pivots toward each other, each plate having an arm
15 extending outwardly therefrom, and wire-supporting hooks adjustably mounted on said arms.

8. In a hat-machine the combination of a stand, a head rotatably mounted thereon, a
20 plate mounted on the head, a plurality of plates movably mounted on the head, and means for simultaneously moving said plates toward each other, said plates having a plurality of upwardly-trending arms extending
25 outwardly therefrom, each arm having a longitudinally-curved slot and a series of hooks mounted on each arm in one plane, and secured to the arm along the slot therein.

9. In a hat-machine, the combination of a
30 plurality of curved arms having longitudinally-curved slots, a series of hooks supported along one side of each arm, each hook having a slot open near one end, a series of bolts, each passing through a slot in one hook and a slot
35 in the arm, and a thumb-nut for each bolt, said

thumb-nuts being arranged alternately on opposite sides of said arms.

10. In a hat-machine, the combination of a curved supporting-arm, a plurality of
40 straight hooks adjustably mounted upon said arm, and a hook mounted upon each arm and projecting above one of said hooks, said hook being curved inwardly with respect to said arm and receiving the straight hook in its
45 curved portion, all of said hooks being mounted in the same plane along one side of said arm, and thumb-nuts for controlling said hooks, some of said thumb-nuts being disposed upon one side of said arm and others of
50 said thumb-nuts being disposed upon the opposite side thereof.

11. In a hat-machine, the combination of an arm having a slot, a series of hooks supported along one side of said arm, each hook
55 having a slot, a series of bolts, each passing through the slot on one hook and the slot on the arm, and a thumb-nut for each bolt, all of said hooks being located in the same plane, some of said thumb-nuts being arranged upon
60 one side of said arm, and others of said thumb-nuts being disposed upon the opposite side of the same.

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

CHARLES P. WILDENBERG.

Witnesses:

SIMON J. BLOOM,
JACOB DIMONT.