

C. HOPPE & C. BECKER.
HAT FRAME MACHINE.
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938,380.

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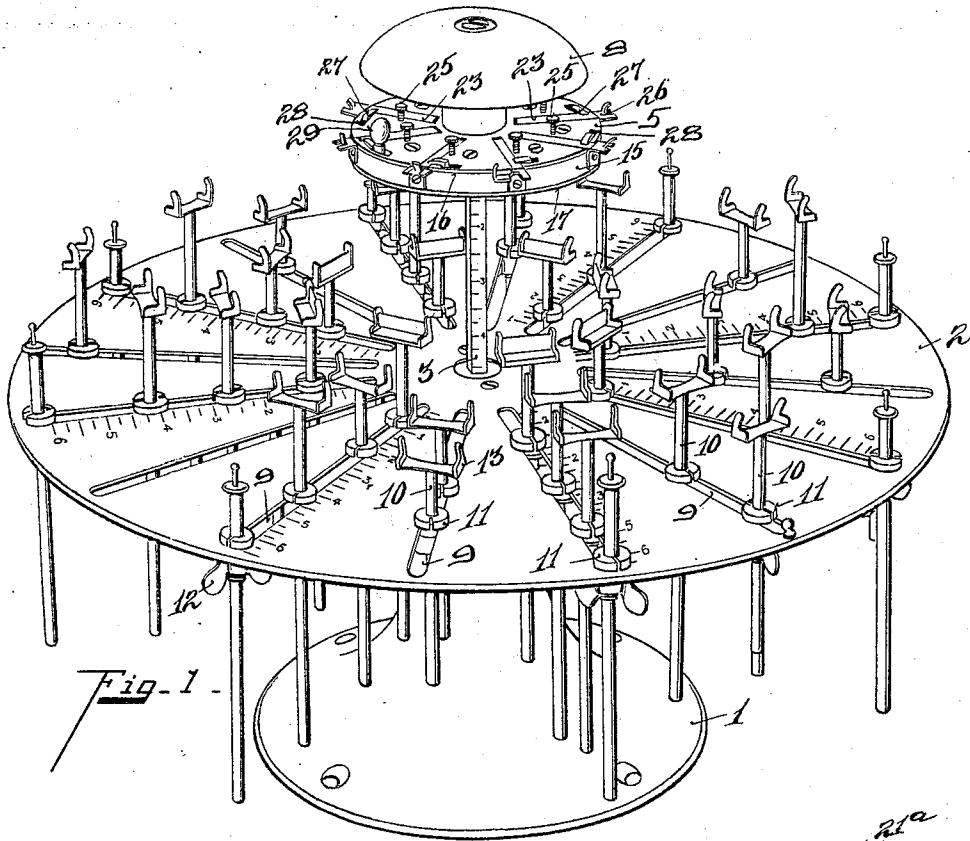


Fig. 1.

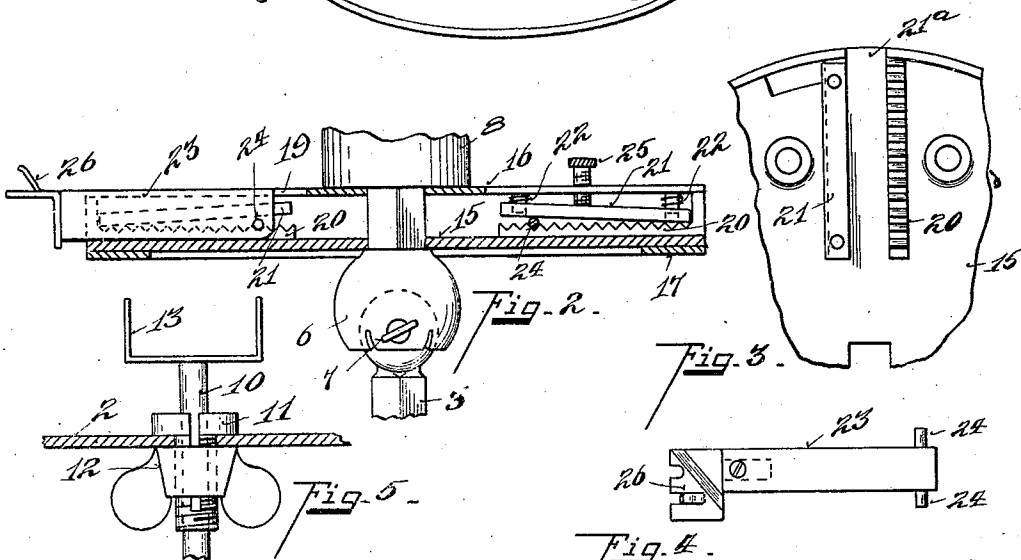


Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

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HAT-FRAME MACHINE.

938,380.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, CHARLES HOPPE and CARL BECKER, citizens of the United States, residing at Cincinnati and St. Bernard, respectively, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Hat-Frame Machines, of which the following is a specification.

Our invention relates to an improvement in hat-frame machines.

The object of the present invention is to simplify the construction and to provide for a wider range of adjustments conveniently arranged for manipulation.

The features of the invention are more fully set forth in the description of the accompanying drawings, forming a part of this specification, in which:—

Figure 1 is a perspective view of the device. Fig. 2 is a cross section through the top disk. Fig. 3 is a detail plan view of the crown disk, illustrating a portion of the interior thereof, principally the lock plate and rack. Fig. 4 is a top plan view of one of the radially adjustable arms of the crown disk. Fig. 5 is a detail view of the vertical post and means for horizontally and vertically adjusting the same.

1 is a pedestal upon which sets rotatively the hat brim forming plate 2.

3 is a rod vertically adjustable in the pedestal 1 and extensible above the plate 2; it is preferably provided with the graduations for determining the vertical height of the crown relative to the brim.

5 is a disk upon which the crown is formed. It is connected to the rod 3 by the ball and socket joint 6, having adjusting screw 7, whereby the crown can be tilted at any desired angle relative to the brim.

8 represents the top piece of the crown concentrically mounted on the disk 5 and may be interchangeable so that the top piece of the crown may be formed of any contour.

The plate 2 is formed with a series of radial slots 9, in each of which is mounted a series of posts 10, having clamping sleeves 11 and clamping nuts 12, which may be radially slid in the slots 9 and which permit the post to be vertically adjusted and clamped in said position of vertical and horizontal adjustment. The posts are provided at their tops with the wire engagers

13. Preferably, the slots 9 are provided with graduations which permit of the series of posts being adjusted in true concentric circles if desired. The disk 5 is preferably formed of the top plate 16, intermediate plate 15 and the bottom ring 17. The bottom ring has a slight rotative motion relative to the top plate. The plate 16 is provided with the radial slots 19. The intermediate plate 15 is provided with the toothed projections 20, between which is formed a slide-way 21^a in alinement with the slot 19 of the plate 16, and 21 represents spring actuated bars held in position by the pins 22 and adapted to yieldingly lie over the toothed projections 20.

23 represents horizontally adjustable arms lying between the plates 15, 16, and within the slots 19 and guide-ways 21^a. The inner ends of the arms are provided with the pin projections 24, forming pivot members extending laterally and resting between the toothed projections 20 and the bars 21. By this construction, the arms may be radially adjusted and secured in place by the set screws 25, passing through the top plate 16 at one side of the slots 19. The manipulation of these screws locks the arms against radial movement. The pivot 24 permits these arms to be swung upward at their outer ends above the disk. The outer ends of these arms 23 are provided with the wire engaging members 26. In order to lock these arms against vertical movement the bottom ring 17 is provided with upwardly projecting latches 27, which project through the slots 28 in the plate 16, there being one upon one side of each of the slots 19. These latches overlap the arm 23 when the ring 17 is swiveled in the appropriate direction by the manipulating handle 29.

In using this machine, the horizontally adjustable posts for forming the brim are secured in the position corresponding to the design of the hat brim to be formed. The disk 5 is set at a proper height and angle to correspond with the design of the crown. The arms 22 being radially adjusted to give the proper crown curvature and they are then locked against vertical or pivotal movement by manipulating the handle 29. The frame is then woven in the ordinary manner. After the frame is formed the lock may be released and in removing the hat-

frame the arms 23 will swing upward, which permits of the ready disengagement of the member 26 from the frame without danger to the design.

5 Having described our invention, we claim:—

1. In a hat-frame forming machine, a brim plate formed with radial slots, posts having wire engaging devices on their upper
10 ends, said posts being horizontally and vertically adjustable in said slots, and a crown forming disk vertically and angularly adjustable above the brim plate, substantially as described.

15 2. In a hat-frame forming machine, a brim plate having wire engaging posts adjustably mounted therein, a crown forming disk having wire engaging arms, each adapted to be independently adjusted radially in
20 the plane of the disk, means for angularly adjusting the disk, and means for securing each of said arms in its adjusted position, substantially as described.

3. In a hat forming machine, a crown
25 holder, a series of wire engaging arms radially adjustable in the plane of the holder, pivotal connections between said holder and the inner ends of the arms permitting the arms to move upwardly when removing the
30 crown, and means rotatable in the plane of the holder adapted to simultaneously lock each of said arms, substantially as described.

4. In a hat-frame forming machine, a crown forming disk, wire engaging arms radially adjustable independently in the disk,
35 ratchet mechanism controlling the said radial adjustment, means for locking each arm in its position of radial adjustment, means for pivotally moving the arms upon their
40 inner ends, and means for simultaneously

locking and unlocking the arms relative to pivotal motion, substantially as described.

5. In a hat-frame forming machine, a crown forming disk, means for vertically and angularly adjusting the disk, a series of
45 wire engaging arms pivotally mounted in the disk and independently adjustable radially therein, and locking means for radial and pivotal movements, substantially as described.

6. In a hat forming machine, a crown holder formed with radial slots, wire engaging arms radially adjustable in said slots and pivoted to the holder at their inner ends, and a rotatable member on the holder formed
55 with a series of latches adapted to simultaneously engage each of said arms and lock them within said slots, substantially as described.

7. In a hat-frame forming machine, a
60 crown forming disk, composed of a top and bottom plate, radial slots in the top plate, ratchet jaws between the plates and adjacent to the slots, wire engaging arms between the plates within the slots having pivot members
65 engaging between the ratchet jaws, means for independently locking the arms in their positions of radial adjustment along the ratchets, latch mechanism carried by the bottom plate adapted to lock the arms to the
70 top plate against pivotal motion, and means for rotating the bottom plate to manipulate said lock, substantially as described.

In testimony whereof, we have hereunto set our hands.

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Witnesses:

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