

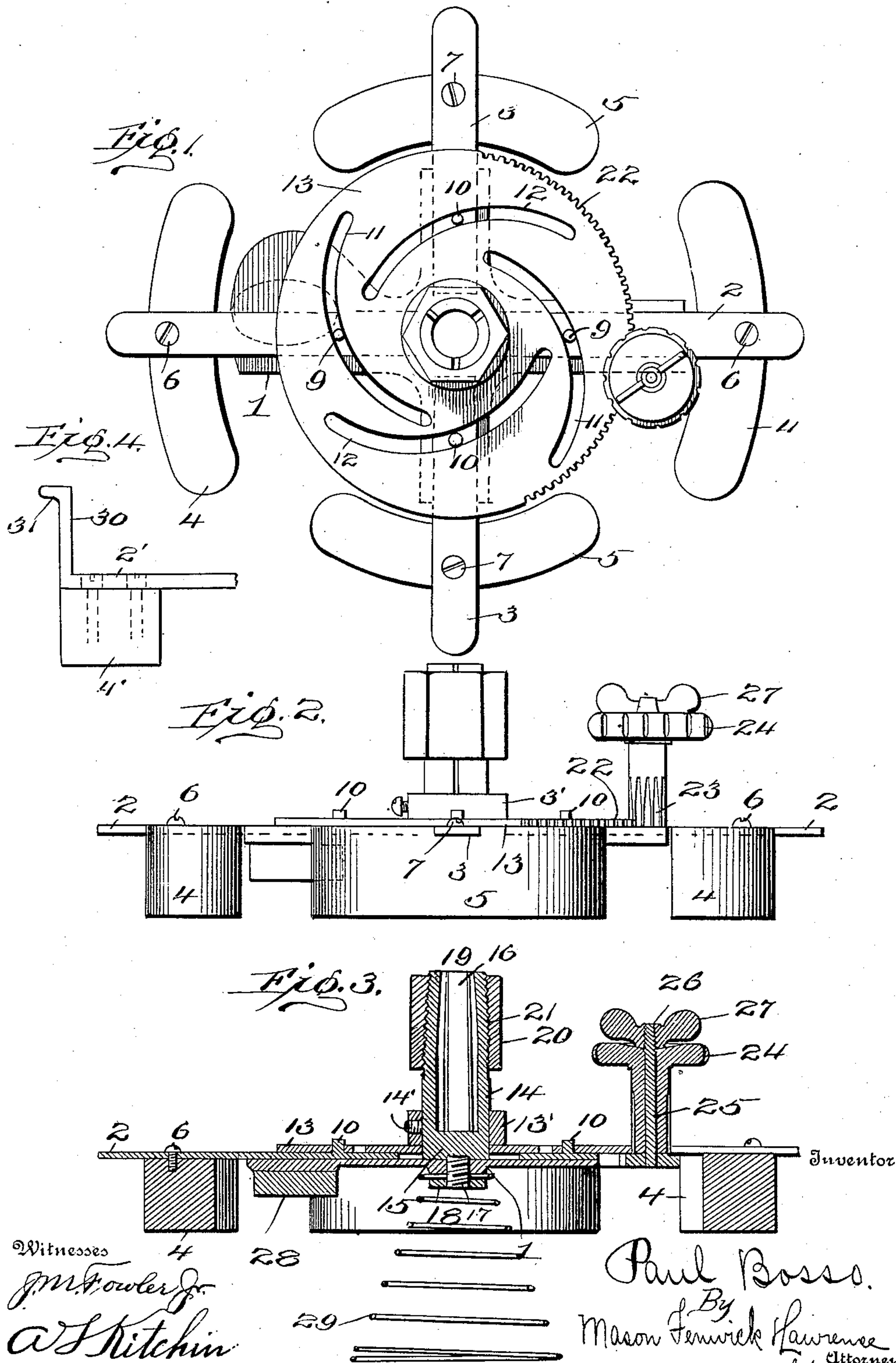
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P. BOSSO.

APPARATUS FOR CLEANING AND POLISHING HATS.

APPLICATION FILED APR. 1, 1907.



UNITED STATES PATENT OFFICE.

PAUL BOSSO, OF SCRANTON, PENNSYLVANIA.

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No. 868,323.

Specification of Letters Patent.

Patented Oct. 15, 1907.

Application filed April 1, 1907. Serial No. 365,776.

To all whom it may concern:

Be it known that I, PAUL BOSSO, a citizen of the United States, residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Apparatus for Cleaning and Polishing Hats; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

10 This invention relates to improvements in apparatus for cleaning, finishing, ironing and performing similar operations on hats, and particularly to holders for grasping hats during the cleaning operations, and comprises the production of means for grasping the sweatband of a hat, and a disk formed with cam slots for operating said means, and improved means for rotating the disk.

15 The invention further comprises the production of improved means connecting the apparatus to a power shaft.

The object in view is the production of a holder that is quickly and easily applied to a power shaft.

20 Another object in view is the production of a segmental rack on a revolving cam disk and a hand operated gear meshing with the rack for operating the cam plate.

25 With these and other objects in view, the invention comprises certain constructions, combinations, and arrangements of parts as will be hereinafter more fully described and claimed.

30 In the accompanying drawing: Figure 1 is a plan view of a holder formed according to the present invention with the spring removed. Fig. 2 is an edge view of Fig. 1. Fig. 3 is a horizontal section through a holder formed according to the present invention. Fig. 4 is a detail fragmentary side elevation of a slightly modified form of a gripping and guiding member.

35 In constructing a holder according to the present invention, I provide a base plate 1, having radial arms which have formed therein guideways for accommodating reciprocating arms or members 2—2 and 3—3 which are adapted to have their outer ends project beyond gripping members 4—4 and 5—5. The gripping members 4—4 and 5—5 may be of any desired shape, but I preferably provide arc shaped members of any desired material as, for instance, wood. The use of wood is usually preferable as the same is comparatively light. The members 4—4 and 5—5 are made preferably arc shaped in order to more easily fit the sweatband of a hat, and give a substantial contact surface. Members 4—4 and 5—5 are secured in position by any suitable securing means as screws 6—6 and 7—7.

40 Near the inner end of the slides or reciprocating members 2—2 and 3—3 are positioned pins or lugs 9—9 and 10—10 respectively, which may be formed integral with the slides or simply rigidly secured thereto in any

convenient way. The pins 9—9 and 10—10 are designed to be reciprocated and to in turn reciprocate slides 2—2 and 3—3 by operating in tangential cam slots 11—11 and 12—12 of plate 13. When plate 13 is rotated it will be perfectly evident that pins 9—9 and 10—10 will be reciprocated thereby and will consequently force outward or inward sliding members 2—2 and 3—3 and consequently force inward or outward gripping members 4—4 and 5—5. By this structure gripping members 4—4 and 5—5 may be arranged to grasp the sweatband of different sized hats without any change in the mechanism of the holder. Plate 13 is loosely mounted upon a stem or shaft 14 so as to freely rotate about the same. Plate 13 is adapted to bear on one side against base plate 1 and on the other side against a collar 13' which is firmly secured in position upon stem or shaft 14 by any desired means as set screw 14'. Stem or shaft 14 is made solid at one end as at 15 and hollow at the other end at 16. End 15 is preferably reduced in size and threaded at 17 for firmly securing the same in base plate 1. A suitable nut 18 is designed to bind the same in position. The end 16 is hollowed out and slotted any desired number of times as at 19 so as to permit contraction and expansion for gripping a power shaft.

45 Secured to the base 1, by nut 18 is a spring 29 that is preferably cylindrical in shape as clearly seen in Fig. 3 of the drawing and is designed to press against the top of the hat being cleaned. The conical shaped spring, shown in Fig. 3 of the drawings, is more particularly designed for holding the top of straw hats in correct position during the cleaning operation, but may be used on other forms of hats, although I may, if desired, make a spring that will be rounded or somewhat conical shaped on top so as to fit the various rounded shaped hats, as, for instance, derbys and the like. By this construction the top of the hat is held in proper shape and the side or rim is held in proper shape by grippers 4—4 and 5—5, and arms 3.

50 Referring more particularly to Fig. 4, will be seen a slightly modified form of gripping members as 4', and arm 2'. The arm 2' is formed with an auxiliary arm 30 that is positioned at right angles to the main arm 2' and has formed on the outer end thereof another arm or extension 31 that may be of any desired length. In this construction a comparatively wide surface (arm 30 and gripping member 4') is provided against which the sweatband is designed to rest during the cleaning operation, and a stop 31 is provided for preventing any accidental removal or displacement of the hat.

55 A nut or gripping member 20 is provided for contracting portion 16 and in order to accomplish this it is beveled and threaded internally with threads that are designed to engage threads 21. As nut 20 is forced down over threads 21, the hollowed out portion 16 is contracted, which contraction is permitted by means of the

slots 19 which may be of any desired number, but for the purpose of illustration I have simply disclosed three. Formed on the periphery of plate or disk 13 is a segmental gear or rack 22 which is designed to engage
 5 a gear 23 which has preferably formed integral therewith a handle wheel 24. Gear 23 is journaled upon shaft 25 which is rigidly secured to one of the radiating arms of base 1 in any convenient way and is provided at its upper end with threads 26 for engaging nut 27
 10 which in turn holds wheel 24 in proper position for permitting gear 23 to engage rack 22. When it is desired to move contact or friction members 4—4 and 5—5 wheel 24 is rotated which in turn acting through gear 23 rotates plate 13 which has formed therein cam slots
 15 11—11 and 12—12 for acting upon pins 9—9 and 10—10 for reciprocating slides 2—2 and 3—3 which carry members 4—4 and 5—5. By this construction members 4—4 and 5—5 may be moved inward and outward quickly and easily and be correctly adjusted in the
 20 least possible time. I have simply shown four reciprocating members as 2—2 and 3—3 but it will be evident that any desired number may be used. I have also shown members 2—2 as being longer than members 3—3 so as to more properly fit the ordinary hat, but if
 25 desired, all the reciprocating members may be made of the same length all within the spirit of the present invention.

In constructing a holder according to the present invention, I preferably provide the same with an enlarged
 30 portion 28 either formed integral or rigidly secured to base plate 1 on the arm opposite gear wheel 23. It is thus positioned in order to counterbalance the weight of gear wheel 23. The remaining parts of the device are made substantially alike and of substantially the
 35 same weight to counterbalance each other so that when the holder is applied to a power shaft it will be well balanced. It will also be observed that members 2—2 and 3—3 project beyond gripping members 4—4 and 5—5 respectively. The members 2—2 and 3—3 are ar-
 40 ranged in this way so as to provide stops for preventing

the hat to be forced too far over upon the holder. The brim of the hat coming in contact with these stops will cause the sweatband to come opposite the gripping members 4—4 and 5—5 and thus present a compara-
 45 tively strong gripping surface.

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

1. A device of the character described, comprising an expansible hat holder, means formed with a rack for ex-
 50 panding the same, and a gear meshing with said rack for operating said means.
2. A device of the character described, comprising an expansible hat holder, a plate formed with cam slots there-
 in and a rack on the periphery thereof, and a gear wheel
 55 meshing with said rack for rotating said cam plate.
3. A device of the character described, comprising re-
 ciprocating members, a cam plate formed with a rack on
 the periphery thereof, said cam plate being adapted to op-
 erate said reciprocating members when said plate is ro-
 60 tated, a gear wheel meshing with said rack for rotating said plate, and a hand wheel for rotating said gear wheel.
4. A device of the character described, comprising an
 expansible hat holder, a plate for expanding said hat
 holder, a rack positioned on said plate, and a gear wheel
 65 meshing with said rack for rotating said plate.
5. A device of the character described, comprising an
 expansible hat holder, means for operating the same, an
 expansible stem secured to said holder, said stem being
 formed with threads on the periphery thereof, and a nut
 70 formed with a conical shaped aperture engaging said threads for contracting said expansible members.
6. A device of the character described comprising an
 expansible hat holder, means for expanding the same, and
 a conical-shaped spring for holding the crown of the hat
 75 placed upon the holder in proper position.
7. A device of the character described comprising a hat
 holder, means for adjusting the position thereof, and a
 spring for contacting with the crown of the hat positioned
 thereon for holding said crown in proper shape during the
 80 operation of the holder.

In testimony whereof I affix my signature in presence of two witnesses.

PAUL BOSSO.

Witnesses:

W. W. BAYLOR,
 J. M. SHEFFIELD.