J. PAYER.

HAT FASTENER.

APPLICATION FILED AUG. 12, 1910.

1,021,111. Patented Mar. 26, 1912.

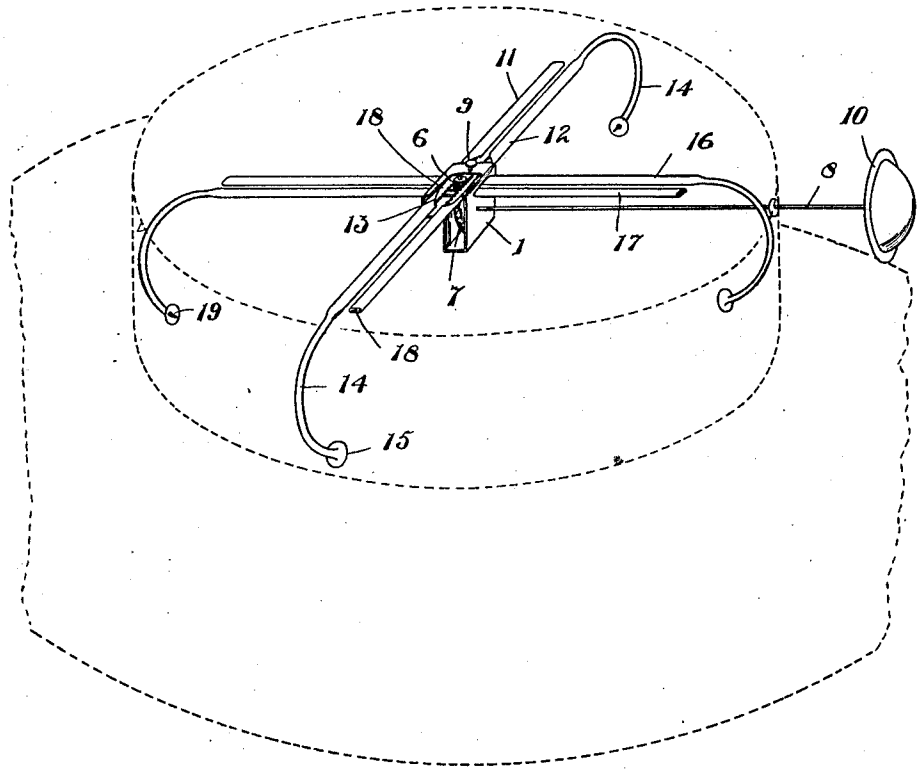
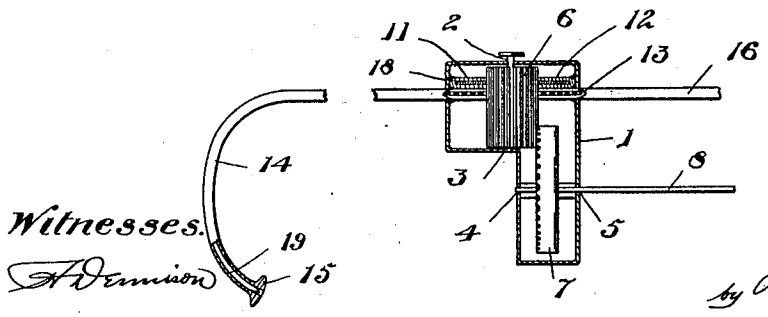


Fig. 1.



Witnesses.

A. Dennison

B. Duck

Fig. 2.

Inventor.

James Payer

by E. J. Fitzsimmons & Haughey

Attys.

UNITED STATES PATENT OFFICE.

JAMES PAYER, OF TORONTO, ONTARIO, CANADA.

HAT-FASTENER.

1,021,111. Specification of Letters Patent. Patented Mar. 26, 1912.

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To all whom it may concern:

Be it known that I, JAMES PAYER, a subject of the King of Great Britain, and resident of the city of Toronto, county of York, Province of Ontario, in the Dominion of Canada, have invented certain new and useful Improvements in Hat-Fasteners; and I do hereby declare that the following is a full, clear, and exact description of the same.

The invention relates to improvements in hat fasteners, as described in the following specification and illustrated in the accompanying drawings that form part of the same.

The invention consists essentially in the novel construction and arrangement of parts, whereby a plurality of pin members are projected inwardly from the side wall of the crown of the hat to engage the hair.

The objects of the invention are, to dispense with the use of hat pins, thereby overcoming the many dangers and inconveniences due to the use of such, and to devise a simple form of mechanism that may be placed in the hat and operated from the outside to hold the hat.

In the drawings, Figure 1 is a perspective view of my device shown partly broken away and showing the outline of the hat in dotted lines. Fig. 2 is an enlarged sectional elevational view of the operating mechanism.

Like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings, 1 is a casing of thin sheet metal preferably formed in L-shape and having the vertically arranged journal bearings 2 and 3 and the horizontally arranged bearings 4 and 5 formed therein.

6 is a spur pinion journaled at the ends in the bearings 2 and 3.

7 is a flanged gear wheel fixedly secured to a spindle 8 journaled in the bearings 4 and 5 and meshing with the pinion 6.

The casing 1 is secured in position about the center of the crown of the hat by means of a suitable thumb screw 9 threaded in the top thereof and the spindle 8 extends outwardly through the side of the crown of the hat and has a suitable ornamental head 10 secured to its outer end, said head forming a handle by means of which the gear 7 may be rotated.

11 and 12 are a pair of flat tubular members extending longitudinally through the casing 1 adjacent to the top thereof and rigidly secured to the side walls and having their inner edges cut away at 13 within said casing. One end of each of the tubular members is formed into a round tube 14 and said round tubular portion is bent downwardly to fit against the inner wall of the side of the hat crown and suitably tacked thereto. The extremities of the tubular portions 14 are bent slightly inwardly and formed with enlarged flattened ends 15.

16 and 17 are flat tubular members similar to the members 11 and 12 arranged in right angular relation to the aforesaid tubular members and extending through the side walls of the casing 1 and rigidly secured therein.

18 are thin flat strips of metal slidably arranged within the flat tubular members 11, 12, 16 and 17 having their inner edges formed with gear teeth meshing with the spur pinion 6. The outer ends of the strips 18 adjacent to the round tubular portions 14 are formed of round flexible spring wire pointed at the outer ends and the said wire portions extend around the bent tubular portions, the points extending out through suitable openings in the flat ends 15 of said tubes.

In the use of this device, the head 10 is turned until the points of the wire members recede within the tubular portions 14. The hat is then placed upon the head of the wearer and the head 10 of the spindle 8 turned in the opposite direction. On the turning of the spindle 8 the gear 7 rotates the pinion 6 and said pinion meshing with the flat toothed portions of the strips 18 forces all of said strips outwardly simultaneously. The outward movement of the strips 18 causes the wires 19 to be projected outwardly beyond the flat ends 15 of the tubes and to engage the hair of the wearer, thereby securely fastening the hat to the head.

This device is very simple in operation and is of very light weight and can be attached to any hat and is quite invisible and forms a very secure means for holding the hat in place. The use of cumbersome and dangerous hat pins is entirely obviated and the mutilation of the hat prevented.

What I claim as my invention is:

1. In a hat fastener, a casing adapted to be secured within the crown of the hat and having a plurality of radially extending tu-

bular members projecting therefrom and formed with inturned outer ends, pin members slidably arranged within said tubular members and adapted to be protruded from the ends of said tubular members to engage the hair, and means supported within the said casing and whereby said pins may be moved inwardly and outwardly.

2. In a hat fastener, a casing formed of sheet metal having a pair of vertically arranged journal bearings and a pair of horizontally arranged journal bearings, a spur pinion journaled within said casing in said vertically arranged bearings, a spindle supported in said horizontally arranged bearings and adapted to extend outwardly through the crown of the hat, a flanged spur gear secured to said spindle within said casing and meshing with said pinion, a pair of tubular members extending through and secured in said casing and having openings cut in their inner walls adjacent to said pinion, toothed members arranged on each side of said pinion and slidably arranged within said tubes, and flexible pin members secured to the ends of said slidable toothed members and adapted to be moved on the turning of said pinion into engagement with the hair.

3. In a hat fastener, a casing adapted to be secured within the hat, a gear and pinion journaled in said casing and mutually engaging, means adapted to extend through the side of the hat for operating said gear and pinion, a pair of flat tubular members arranged parallel to each other and extending through said casing, one of each of said pair having a round tubular end bent downwardly and inwardly, toothed members slidably arranged in said tubular members in engagement with said pinion and having flexible pin ends adapted to extend around the curved tubular ends thereof and to project outwardly from the ends to engage the hair.

4. In a hat fastener, a casing adapted to be secured within the hat, a plurality of parallel pairs of tubular members rigidly secured to said casing, said pairs being secured in angular relation to each other and having openings in their inner side walls within said casing, a spur pinion journaled in said casing and extending between the members of each of said pairs of tubes, slidable toothed members arranged within said tubular members and having flexible pin ends adapted to be projected inwardly to engage the hair on the turning of said pinion, and means for rotating said pinion.

Signed at the city of Toronto, Canada, this 9th day of August, 1910.

JAMES PAYER.

Witnesses:
H. DENNISON.
B. TUCK.