

O. C. PUGH.
CANE OR SIMILAR ARTICLE.

Patented May 23, 1893.



UNITED STATES PATENT OFFICE.

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CANE OR SIMILAR ARTICLE.

SPECIFICATION forming part of Letters Patent No. 498,187, dated May 23, 1893.

Application filed February 7, 1893. Serial No. 461,354. (No model.)

To all whom it may concern:

Be it known that I, OLIVER C. PUGH, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Canes or Similar Articles; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to canes or walking-sticks, umbrella-sticks, and to various other kinds of staffs, and the objects of my invention are to provide attachments for such sticks or staffs which shall adapt them for use as receptacles for flags, guide maps and various other articles of display or reference, and which shall possess the utmost degrees of simplicity, strength and durability of construction; furthermore, to produce attachments which, in addition to the advantages above enumerated, shall be so compact in arrangement as to involve no material alteration in the external appearance of the sticks or staffs to which they may be applied, and which shall be practically entirely concealed within the stick or staff.

To the above purposes my invention consists in certain peculiar and novel features of construction and arrangement as hereinafter described and claimed.

The more precise nature of my invention will be better understood when described with reference to the accompanying drawings in which—

Figure 1 is a side elevation of the upper part of a cane or staff embodying my invention. Fig. 2 is a central transverse vertical section of the same, taken on the line 2—2 of Fig. 1. Fig. 3 is a detached view, in side elevation, of the revoluble barrel, its winding spring, and its flexible strip. Fig. 4 is a plan view of the same. Fig. 5 is a horizontal section of the cane or staff, taken on the line 5—5 of Fig. 2. Fig. 6 is a horizontal section of the cane or staff taken on the line 6—6 of Fig. 2. Fig. 7 is a view in central transverse vertical section, of a modification of construction also embodying my invention. Fig. 8 is an inverted plan view of the head of the staff.

The body portion A of the cane or staff may

be of wood or of any other suitable material, and it is hollowed out longitudinally so as to form a cavity A' extending from one end of the stick a suitable distance toward the opposite end thereof, said cavity being open at one end and closed at its opposite end, as shown. Through one side of the wall of this cavity A' is formed a slot *a* which extends from the open end of said cavity to or toward its closed end, while through the wall of said cavity, at a point opposite from the longer slot *a*, is formed a much shorter slot *a'* which also extends from the open end of the cavity longitudinally toward its opposite end.

Axially within the cavity A' is placed a tubular or hollow barrel B, closed at one end and open at the opposite end, and having the margin of its open end formed with ratchet teeth *b*, for a purpose to be presently explained. The closed end of the cavity A' is formed with a central recess *a*² into which the closed end of the barrel B extends and within which said end of the barrel is arranged to freely turn axially. The barrel B is of much less external diameter than the internal diameter of the cavity A' and said barrel is also of somewhat less length than said cavity, so that the ratcheted end of the barrel shall be wholly within the open end of the cavity. A spiral spring C is placed within the barrel B and one end of said spring is firmly secured to the closed end of the barrel. The coiled or convoluted portion of this spring is of such length as to extend throughout the barrel B from its closed end to its open end, and the free extremity of the spring extends outward beyond said open end of the barrel. The outer end portion of the spring C is bent crosswise of the spring so as to form a transverse catch, the material being shown as first bent outward at right angles, as at *c*, to a suitable length, then backward or inward above the portion *c* so as to extend outwardly in the opposite direction, and finally backward and inward, as at *c*², so as to extend about over the middle of the portion *c'*. The bend *c*³ thus formed protrudes outward through the longer slot *a*, while the bend *c*⁴ enters the shorter slot *a'*; these slots preventing the cross-head of the spring from turning axially.

The open end of the barrel B is loosely sur-

rounded by a tubular collar or plug B' of wood or metal, which is tightly inserted into the open end of the stick or staff; said collar or plug being shown as counterbored in its under side to receive the end of the barrel B, and having oppositely disposed slots b^5 b^6 to receive the arms c^3 c^4 of the spring head.

D designates the head of the cane, this head being either in the form of a knob, as shown, or of any other desirably fanciful or ornamental form. The under side of this head is countersunk so as to form a marginal flange d which, when the head is properly connected to the stick or staff, surrounds or embraces the open end of said stick; this flange being preferably surrounded by a ring or ferrule D' of metal in order to properly strengthen the flange.

It is to be understood that the operative parts embodying my invention may be applied either to an upper or a lower part of a staff, or even to an intermediate part thereof, and that the head as shown is principally for purposes of illustration. However, in this instance, the flange d is formed with a slot d' which registers with the open extremity of the slot a , the ferrule or ring D' having a similar slot or a recess d^2 registering with the slot d' so as to permit the bend c^3 of the spring-head to protrude from the staff or cane. At a point opposite from the slot d' , the flange d is formed with a similar slot d^3 into which protrudes the bend c^4 of the spring-head, this slot d^3 being covered by the ring or ferrule D' so that the bend c^4 is not exposed either to view or to touch.

To the barrel B is secured the inner edge of a flexible strip E of cloth, paper or any other suitable flexible material. The inner edge of this strip may be secured in any suitable manner to the barrel B, either by an overlying strip e , riveted as at e' to the barrel, or otherwise. The strip extends outward through the longer slot a of the stick A, and the arrangement is such that said strip may be drawn out through the slot, unwinding meanwhile from the barrel B and simultaneously winding the spring C. While the strip is being thus drawn out the revolution of the barrel B causes the ratchet-teeth b to slip around beneath the part c of the spring-head; and, when said strip has been drawn out as far as desired, the part c of the spring-head will, by engaging as a pawl with one of the ratchet-teeth b , prevent any undesirable retrogression of the barrel. When it is desired to again wind the flexible strip around the barrel B so as to conceal the strip within the stick or staff, the user applies his finger to the portion c of the spring-head so as to move it out of engagement with the ratchet-teeth b of the barrel B. This permits the spring C to rotate the barrel B so as to wind the flexible strip E thereon, and at its outer end or margin said strip is provided with means for preventing the outer margin from being drawn inward through the slot a . A considerable variety of

means are applicable to this purpose and therefore, principally for the sake of illustration, I have shown a rigid rod or strip E' as secured to the outer margin of the flexible strip E; this rigid rod being either of greater length or of greater width than the slot a , or both of greater length and width than the slot, so as to engage the outer margins of said slot, when the flexible strip E is drawn inward. A ring or loop e^2 or any equivalent contrivance for affording a grasp upon the flexible strip E may be provided to facilitate the drawing outward of the strip.

In Fig. 7 I have shown a ball or sphere α^4 as interposed between the closed end of the barrel B and the closed end of the cavity A', so as to lessen the amount of friction produced by the revolutions of the barrel. The ball α^4 lies within a cup-shaped depression α^3 formed in the closed end of the cavity A' and the outer surface of the closed end of the barrel is similarly concaved to partly embrace the ball.

The flexible strip E may be a flag or a banner, or it may be a map, a guide-sheet, or any other suitable article of display or reference.

I claim as my invention—

1. A stick or staff comprising a body portion having a tubular portion slotted longitudinally through one of its walls, a tubular barrel having an open end provided with ratchet-teeth and located within the tubular part of the stick or staff, a spiral spring extending into the interior of the barrel and secured at one end to said barrel, a cross-head carried by the opposite end of the spring and engaging the ratchet-teeth of the barrel, and a flexible strip connected to the barrel and extensible through the slot of the stick or staff, substantially as set forth.

2. A stick or staff comprising a body portion having a tubular portion slotted longitudinally through its sides, a tubular barrel placed within the tubular portion of the staff and having an open end provided with ratchet-teeth, a spiral spring extending within the barrel and secured thereto at one of its ends, a cross-head at the opposite end of the spring and engaging the ratchet-teeth and also protruding through one of the slots of the tubular part of the staff, a head for closing the end of the tubular part of the staff, a ring or collar fixed within said end of the staff, and a flexible strip secured to the barrel and extensible through one of the slots of the staff, substantially as set forth.

3. A stick or staff comprising a body portion having a tubular portion slotted longitudinally, a revoluble tubular barrel placed in said tubular portion and having one of its ends serrated and open, a ball interposed between the closed end of the tubular part of the staff and the adjacent end of the barrel, a winding-spring placed within the barrel and secured at one end thereto and carrying at its other end a cross-head to engage the serrations of the barrel, and a flexible strip

secured to the barrel and extensible through one of the slots of the stick or staff, substantially as set forth.

5 4. A stick or staff comprising a longitudi-
nally slotted tubular portion, a revoluble bar-
rel inclosed in said tubular portion having
an open end provided with a serrated mar-
gin, a flexible strip secured to the barrel and
extensible through one of the slots of the tubu-
lar portion, and a spiral spring secured at
10 one of its ends to the barrel and having its

opposite end bent oppositely in transverse
relation to the spring, to form a head for en-
gaging the serrations of the barrel, substan-
tially as set forth.

In testimony that I claim the foregoing as
my invention I affix my signature in presence
of two witnesses.

OLIVER C. PUGH.

Witnesses:

TAYLOR E. BROWN,
JOHN L. CONDRON.

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