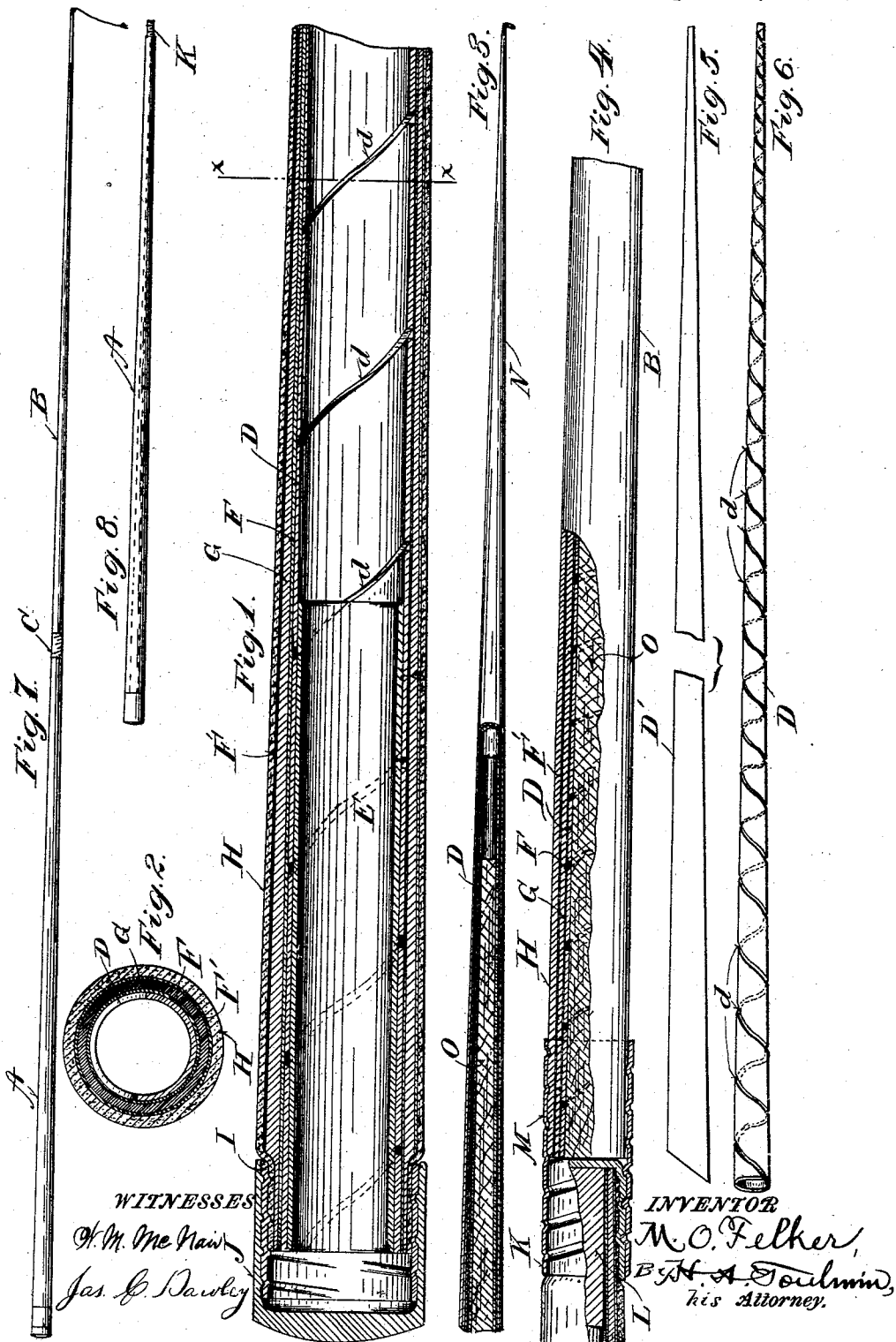


(No Model.)

M. O. FELKER.
WHIP CANE.

No. 482,895.

Patented Sept. 20, 1892.



UNITED STATES PATENT OFFICE.

MELANCTHON O. FELKER, OF SPRINGFIELD, OHIO.

WHIP-CANE.

SPECIFICATION forming part of Letters Patent No. 482,895, dated September 20, 1892.

Application filed April 8, 1892. Serial No. 428,287. (No model.)

To all whom it may concern:

Be it known that I, MELANCTHON O. FELKER, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Whip-Canes, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to certain new and useful improvements in whips, and is especially adapted to the style in which the whip is designed to be used as a cane, and being an improvement over my Letters Patent, No. 459,081, dated September 8, 1891, and the peculiarities of which will be hereinafter fully described and claimed.

In the accompanying drawings, on which like reference-letters indicate corresponding parts, Figure 1 represents a longitudinal sectional view of the handle end of the stock; Fig. 2, a cross-section on the line *x x*, Fig. 1; Fig. 3, a sectional view of a portion of a whip end; Fig. 4, a partial sectional view of a portion of the stock and whip end at the connecting-joint; Fig. 5, a detail of a blank from which the spiral is formed; Fig. 6, a detail of the spiral formed from said blank; Fig. 7, a view of the whip complete; and Fig. 8, a view of the device when used as a cane, the whip end being mounted within the stock, as dotted.

The letter A designates the stock, and the letter B the whip portion, mounted thereon by a suitable joint C. In my former patent before referred to I use a flexible metallic hollow core. I propose in the present construction to secure greater flexibility by constructing a core D, of sheet metal, in the form of a spiral, and the edges of which are separated by a space *d* of sufficient size to prevent the adjacent portions from overlapping or buckling when the core is put to ordinary use. Each portion of the section or spiral has therefore sufficient play between the adjacent sections, and a great flexibility, combined with resistance to being collapsed, is secured. The core D is preferably tapered in size of cross-section from the butt outward, and the core-blank D, from which the spiral form D is made, is also tapered, whereby a further increase of flexibility as the size diminishes is

secured. Figs. 5 and 6 show the blank form and the coiled spiral form of said core.

In Fig. 1 I provide an auxiliary tube E, inserted or otherwise connected with the core D, to provide additional stiffness and weight to the handle end of the stock. The outside of the core is preferably wrapped with thin paper F to prevent the glue used in securing the inclosing wrapping of canvas or other filling G from entering the open spaces *d*. Additional paper F' may be used outside the canvas, and a covering of leather H or other suitable outside wrapping may be used, as desired.

The handle end of the stock is provided with a ferrule I, swaged down upon or otherwise secured to said end and provided with screw-threads for the mounting of the cap-ping J thereon, as shown in Fig. 1. The outer end of the stock is provided with a tip K, Fig. 4, swaged down upon the core and its inclosing layers, the interior of the core being stiffened by a plug L, of wood or other suitable material, to resist the compressive action and secure stiffness at the joint. The sleeve or ferrule M matches the screw-threaded tip-ferrule K, as in Fig. 4, and is secured to the whip end, which may be similarly formed to the stock end or be of the ordinary construction. I will describe and illustrate, however, an improved whip portion embodying the spiral core. This form is shown in Figs. 3 and 4. In Fig. 3 the spiral core is provided with a continuation or tip end of the rawhide N, fitting within the small end of the metal core and tapering to a point beyond, thus forming a tough flexible tip end. The spiral core and the rawhide extension may be wrapped as above described or in any suitable manner. In order to render the whip end solid and prevent too great flexibility thereof, I employ a rattan filling O, Figs. 3 and 4, within the remainder of the spiral core above described not occupied by the rawhide end. This filling also assists in holding the spiral core-sections in place and resists excessive bending, tendency to buckle the sections on each other, and prevents the set of the metal.

I have provided in the above construction a gradually-increasing flexibility from the handle to the tip end of a whip and a stiffness and resiliency that will preserve the

form and shape of the whip, while giving great flexibility thereto.

As shown in Fig. 8, the whip end when dis-
mounted from the stock may be inclosed with-
in said stock. I may construct this whip M
in the ordinary manner and of the ordinary
or any desired materials instead of construct-
ing the whole whip of the improved form
above described and illustrated without de-
parting from the spirit of my invention.

I am aware that a whip-coupling consisting
of a tube of thin metal in which sharp spiral
grooves are formed adapted to screw their
way upon the covering of the broken ends of
a whip and form a joint is old; also, that a
whip with a spiral core and an outer wrap-
ping and a connecting interior stay-rod lo-
cated within said core from one end to the
other has been shown and described previ-
ous to my application. I do not therefore
lay claim to such devices, but present my in-
vention as specific improvements over such
forms and as possessing points of practical
advantage, as hereinbefore set forth.

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

1. As an improvement in whip-canes, the
combination, with a hollow open core of sheet
metal wound in a spiral form with an open
channel between the edges, substantially as
shown and described, of a plug at the lesser
end within the core, a tip-ferrule of compres-
sible metal at the lesser end, having spiral

grooves indented into the same while mount-
ed on the end, whereby the plug resists the
compressive action in forming the grooves
and the latter maintain the tip-ferrule in
place, and a whip end having a matching fer-
rule adapted to screw upon said tip-ferrule
for use as a whip and to be mounted within
the core for use as a cane.

2. As an improvement in whip-canes, a spe-
cial form of whip end, consisting of a taper-
ing and spirally-wound sheet-metal core with
open edges to give flexibility, a filling of rat-
tan within said core to prevent the buckling
of the core at the edges when bent extremely,
an outer capping of overlapping layers, a
rawhide tip extension inserted within said
core and covering, a hollow open core adapted
to receive said whip end and constitute the
stock of the whip, wrapping-layers outside
said stock to give body thereto, a stiffening-
tube at the butt-end, a cap therefor, a stiffen-
ing-plug at the outer end of the stock to so-
lidify the core, a tip-ferrule inclosing said
end and layers and held thereon by indented
spiral grooves, substantially as shown and
described, and a matching ferrule secured to
the whip end to mount the latter on the stock
for use as a whip.

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

MELANCTHON O. FELKER.

Witnesses:

WARREN M. MCNAIR,
JAS. C. DAWLEY.