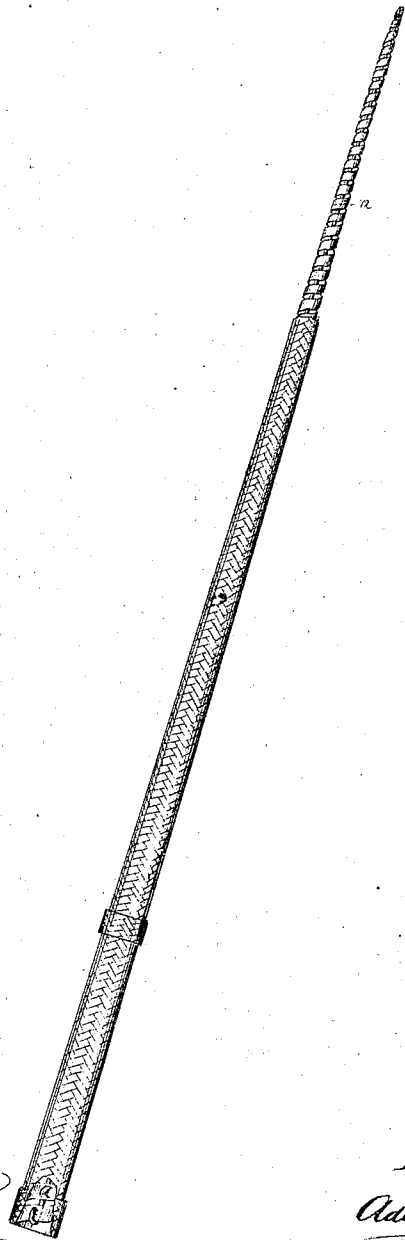


A. C. Rand,

Write.

No. 102863.

Patented May 10, 1870.



Witnesses
H. J. Smith
J. F. Bealer

Inventor
Adison C. Rand

United States Patent Office.

ADDISON C. RAND, OF WESTFIELD, MASSACHUSETTS.

Letters Patent No. 102,863, dated May 10, 1870.

IMPROVEMENT IN WHIPS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, ADDISON C. RAND, of Westfield, in the county of Hampden and State of Massachusetts, have invented an Improvement in Whips; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

My improvement consists primarily in a whip or whip-stock having its body formed of or covered by a strip of metal, preferably steel, wound into a long tapering coil or spiral, said coil being protected by an outer wrapper, braided, plaited, or sewed around it as in common whips.

The drawing represents a whip or whip-stock embodying my improvement, a portion of the whip being broken away to more clearly show the invention.

a denotes the metal strip or ribbon, wound in spiral form, and with the adjacent edges of the coils nearly or quite abutting.

The coil may be wound around the body of the whip, or may itself form the body, in which latter case I prefer to connect the upper and lower ends of the coil, by a stay-rod *b*, to prevent elongation of the coil.

The coil is preferably made tapering, as seen in the drawing, and the coil-forming strip *a* may be wider at one end than at the other, the tip-end being the narrower; or, the tip-end may be thinner than the oppo-

site end, the increase of thickness from the tip-end to the butt being gradual.

Having thus made or covered the body of the whip with this spiral or coil, I encompass the coil with an outer wrapping or cover made and applied as in ordinary whips, such wrapper lying directly against the outer surface of the coil, or being separated therefrom only by some thin flexible material, like paper.

The strength, cheapness and durability of a whip made in accordance with my invention will be obvious.

It will also be obvious that my improvement allows of a whip being made as heavy toward the handle, and as light toward the tip, as may be found necessary or desirable to give it that "poise" or proper distribution of its weight in respect to its length essential in a good whip.

Two or more coils wound spirally in the same direction may be used, their edges abutting or lapping, or one coil covering another, but I prefer a single coil.

I claim a whip or whip-stock having its body formed of or covered with steel or other metal wound in a coil or spiral form, when such coil or spiral is encompassed by an outer cover or wrapper, substantially as shown and described.

ADDISON C. RAND.

Witnesses:

FRANCIS GOULD,
J. F. BEALE.