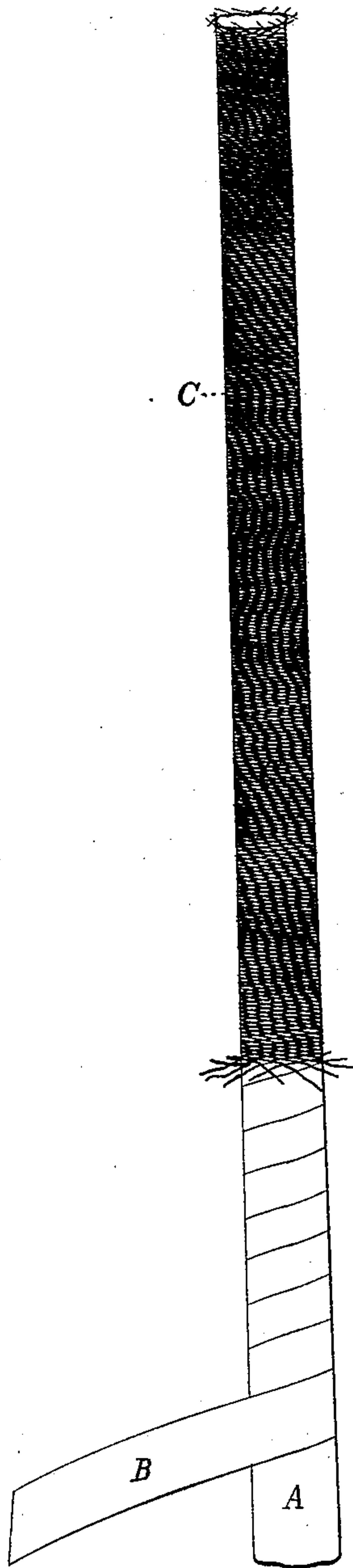


T. W. ROUNDS & T. L. REED.
Whip.

No. 202,378.

Patented April 16, 1878.



WITNESSES.

W. J. Perry
H. B. Perry

INVENTORS.

Thomas W. Round
Thomas L. Reed
by their Attorney
J. G. Perry

UNITED STATES PATENT OFFICE.

THOMAS W. ROUNDS AND THOMAS L. REED, OF PROVIDENCE, R. I.

IMPROVEMENT IN WHIPS.

Specification forming part of Letters Patent No. **202,378**, dated April 16, 1878; application filed January 16, 1878.

To all whom it may concern:

Be it known that we, THOMAS W. ROUNDS and THOMAS L. REED, both of the city and county of Providence, Rhode Island, have invented certain Improvements in Whips; and that the same are fully described in the following specification and drawings hereto annexed.

For many years the most desirable whips have been those having a whalebone stock or body, with or without a covering of fibrous or other suitable material.

A peculiar excellence of whalebone is its great elasticity and its high specific gravity, which qualities adapt it for striking an effective blow, and give to a whip of that material a degree of flexibility very agreeable to the hand of the driver. The objections to such whips are their high cost, and the brittle nature of whalebone when exposed to extreme cold.

As a substitute, whips have been made of a body of rattan, and a braided, woven, or wound covering of various materials; but these whips, while avoiding in some degree the objections to whalebone, have not that agreeable feel, nor that peculiar resilience which characterizes whalebone whips, and, moreover, are not wholly impervious to moisture.

Our invention consists in a whip having a rattan or other suitable body inclosed in a wrapping formed from the intestines of animals, either with or without other covering.

The drawing is a representation of our improved whip in various stages of its manufacture.

A is the stock, body, or center-piece, preferably of rattan, but may be made of other material, tapering gradually from butt to tip. B is a strip of the covering material, formed from one or more thicknesses of the intestines of animals, preferably swine, and applied to the stock A by winding or wrapping it about the same spirally, as shown, or longitudinally, or transversely; and C is an outer covering.

The body of the stock A and one side of the strip B should be coated with cement, or otherwise, so that the strip may be firmly

united to its base; and its successive folds or wrappings may be joined permanently to each other.

In preparing the strips B for use, we first clean thoroughly the intestines, and slit them, or slit and subsequently clean them, then proceed to cure and prepare them, and to unite from two to six thicknesses (when more than one is required) into a single long and narrow strip, in a manner well known, by which means we obtain a thick and strong strip of nearly transparent pliable material, impervious to water and of great durability. These strips are necessarily narrow; hence the spiral winding indicated in the drawing is most advantageous, as avoiding the necessity of numerous joints.

By suitable mechanism the winding of the strips may be made very compact and a good outward finish obtained.

If desired, an outer covering may be applied by braiding or winding over and upon the wound strips an envelope of fibrous or other suitable material, in any of the ordinary methods.

The employment in our whip of the pliable intestinal wrapping above described, in combination with the rattan body, gives to the finished article the quality of elasticity and impermeability, as well as that agreeable feel which characterizes the whalebone whips, and furnishes an article more durable, and at a much lower price.

Having thus described our improvement in whips, we claim—

1. As an improved article of manufacture, a whip consisting of a rattan or other suitable body inclosed in a wrapping formed from the intestines of animals, substantially as set forth.

2. The combination, in a whip, of a suitable central body, a wrapping formed from the intestines of animals, and an outer covering of fibrous material, substantially as set forth.

THOMAS W. ROUNDS.
THOMAS L. REED.

Witnesses:

JOHN B. HUMPHREYS,
A. CALDWELL.