(No Model.)

G. E. ELY & E. E. ELLIS.

WHIP.

No. 260,465. Patented July 4, 1882.

Fig. 1.

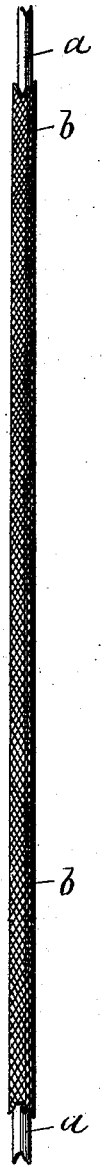


Fig. 2.

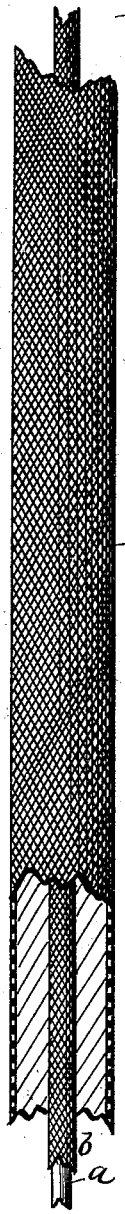
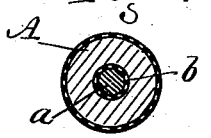


Fig. 3.

Fig. 4.



Attest.
Edward P. Hollett
R. E. White

Inventors.
Geo. E. Ely,
Edgar E. Ellis,
per R. F. Osgood,
atty.

UNITED STATES PATENT OFFICE.

GEORGE E. ELY AND EDGAR E. ELLIS, OF ROCHESTER, NEW YORK.

WHIP.

SPECIFICATION forming part of Letters Patent No. 260,465, dated July 4, 1882.

Application filed October 24, 1881. (No model.)

To all whom it may concern:

Be it known that we, GEORGE E. ELY and EDGAR E. ELLIS, both of Rochester, Monroe county, New York, have invented a certain new and useful Improvement in Whips; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation of a portion of the whip-center which constitutes our improvement. Fig. 2 is a similar view of a portion of a whip with the center in place. Figs. 3 and 4 are cross-sections respectively of Figs. 1 and 2.

Our invention consists essentially of a whip-center composed of a small rod of rattan or wood, provided with an exterior fibrous covering woven, platted, or otherwise applied, said center being embedded in the center of the whip, as hereinafter more fully described.

We first provide a long slender rod of rattan or wood, *a*, and then plat or weave upon its surface a covering, *b*, of textile material, as shown in Fig. 1. The most convenient and effective way is to run the rod through a platting-machine, such as is used for covering the outside of whips, which will produce a tight thread covering; but it may be done in any other suitable way. The whip-center thus produced may be made of any desired length, but is usually about the same length as ordinary centers or cores of whips.

This device constitutes a new article of manufacture, which may be put into the market like whalebone and be used by the manufacturers of whips. Previously to being platted the center *a* is treated to a composition or sizing, which soaks through the whole substance of the wood and penetrates every pore, and after being platted the platting is also treated to the same material, the whole center being thus filled and covered with the composition, which renders it tough, strong, very flexible, and elastic, and prevents the cracking and breaking which occurs where ordinary glue or sizing is used.

The whip A is of ordinary form, being made of rattan, the center being grooved out, and the whip-center *a b* being laid in the groove, cemented in place, the whip being then platted on the outside and rolled and finished in the ordinary way.

We are aware that whips are known having a center or core made entirely of threads platted together in a roll by running through a platting-machine. In such case the center of the whip is a porous body, which has no strength to resist the bending of the whip, and the whip is really weakened by grooving it out, and is not so strong as ordinary whips having a rattan filling, and will easily bend or break, and lacks in the requisite element of elasticity to preserve its straight form.

The design of this invention is to produce a whip-center in which a solid rod is combined with a textile covering, so that while the covering gives the desired strength longitudinally the wooden center gives the necessary strength transversely to prevent bending and breaking and to preserve the desired elasticity. By thus winding or covering the wood center it is very greatly stiffened, so that it is much more effective in that respect than simple wood, while the fibrous covering forms a better surface for cementing in the groove of the whip.

We do not claim a whip having an external platted covering; nor do we claim a whip-core made of a platted fibrous roll or body; but

We claim—

1. As a new article of manufacture, a whip-core for placing in the center of a whip, composed of a rod of rattan or wood and a fibrous or textile covering on the exterior surface of the rod, as herein shown and described.

2. A whip consisting of a rattan or wood core, platted on its outside, and forming the center of the whip, a rattan or wood filling outside the platted core, forming the body of the whip, and an exterior platted covering to the body of the whip, as herein shown and described.

In witness whereof we have hereunto signed our names in the presence of two subscribing witnesses.

GEORGE E. ELY.
EDGAR E. ELLIS.

Witnesses:
R. F. OSGOOD,
CHAS. A. WIDENER.