

(No Model.)

E. K. WARREN.

WHIP CORE.

No. 376,273.

Patented Jan. 10. 1888.

Fig. 1.

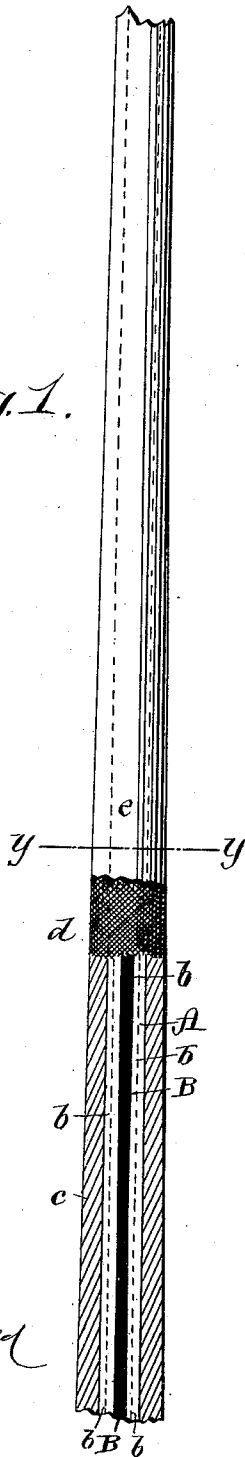
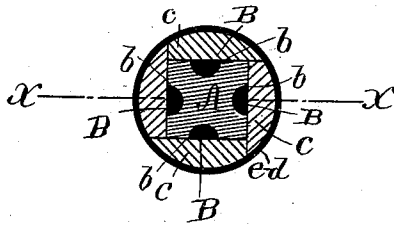


Fig. 2.



WITNESSES:

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WHIP-CORE.

SPECIFICATION forming part of Letters Patent No. 376,273, dated January 10, 1888.

Application filed February 19, 1887. Renewed September 26, 1887. Serial No. 250,783. (No model.)

To all whom it may concern:

Be it known that I, EDWARD K. WARREN, of Three Oaks, in the county of Berrien and State of Michigan, have invented a new and useful Improvement in Whip-Cores, of which the following is a full, clear, and exact description.

This invention relates to whip cores or centers which are of a compound character—that is, which are made up of different materials—namely, one of a strong or superior description, such as whalebone, and the other of an inferior kind, such as rattan, both being arranged in direction of the length of the core. Heretofore it has been customary in thus constructing whip-cores to arrange the superior and generally more expensive material in and along the center of the core, and the inferior material upon the outside of it, and in some cases to divide, as by saw-kerfs, the inferior material and insert the superior material within and through said kerfs.

My invention, however, essentially differs from these constructions; and it consists in making the center of the core not only solid, or undivided longitudinally, but the main portion of the core itself of an inferior material—such as rattan—and grooving the same longitudinally and inserting in the said grooves cords of the superior and stronger material, substantially as hereinafter described, and pointed out in the claims. This construction of the whip-core is based upon the principle that the strongest portions of the core should be placed as near the outside as possible, where the core receives the greatest strain, as the whip is bent when the strain increases from the center toward the exterior of the core. Said construction accordingly enables me to use a solid-core of inferior material at its center and yet to make a very serviceable whip by adding strength to the outside of the core as a core.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 represents a partly-sectional and broken longitudinal view of a whip in part embodying my invention, the section being taken upon the line *xx* in Fig. 2. Fig. 2 is a transverse section of the same upon the line *yy* in Fig. 1.

A indicates the main body of the core,

which may be of any suitable shape in transverse section—such as square or otherwise of polygonal shape, or round—and which is formed of the inferior material of the compound core—usually cane or rattan—the outer end of which may be spliced out with whalebone, if desired. In this body A of the core, for the full length thereof, if desired, two or more longitudinal grooves, *b*, are cut or otherwise made, and cords B, which constitute the superior or stronger material, inserted and secured therein by gluing or otherwise. These cords, it should be borne in mind, are only on or in the exterior surface of the core, and do not intersect the core like flat strips throughout its length. Said cords may be of any suitable material different from that of the main body of the core that will give the necessary extra strength and flexibility or elasticity to the core. Thus they may be made of fibrous or textile material—such as cotton, linen, or hemp—or of leather or rubber, or even of wire. The core thus formed is completed to form the whip in the usual or any suitable manner. Thus it may be “stalked” by pieces of rattan, *c*, glued about or around the core, and the whole afterward put into a lathe and turned round and tapered, so as to give the necessary taper to the whip, and then inclosed by a plaited cover, *d*, and a coating of suitable material, *e*, to give a finish to the whip, subsequently applied; or the whip may be otherwise completed upon the herein-described core.

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

1. A whip-core provided with longitudinal grooves in its exterior surface adapted to receive strengthening-cords, substantially as specified.

2. A whip-center formed of a core having longitudinal grooves in its exterior surface and strengthening-cords inserted within said grooves, essentially as described.

3. In a whip-core, the solid body A, having longitudinal grooves *b* in its exterior surface, and strengthening-cords B, of different material, inserted within said grooves, substantially as shown and described.

EDWARD K. WARREN.

Witnesses:

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