(No Model.)

G. E. WHIPPLE.

WHIP.

No. 452,327. Patented May 12, 1891.

Fig. 1.

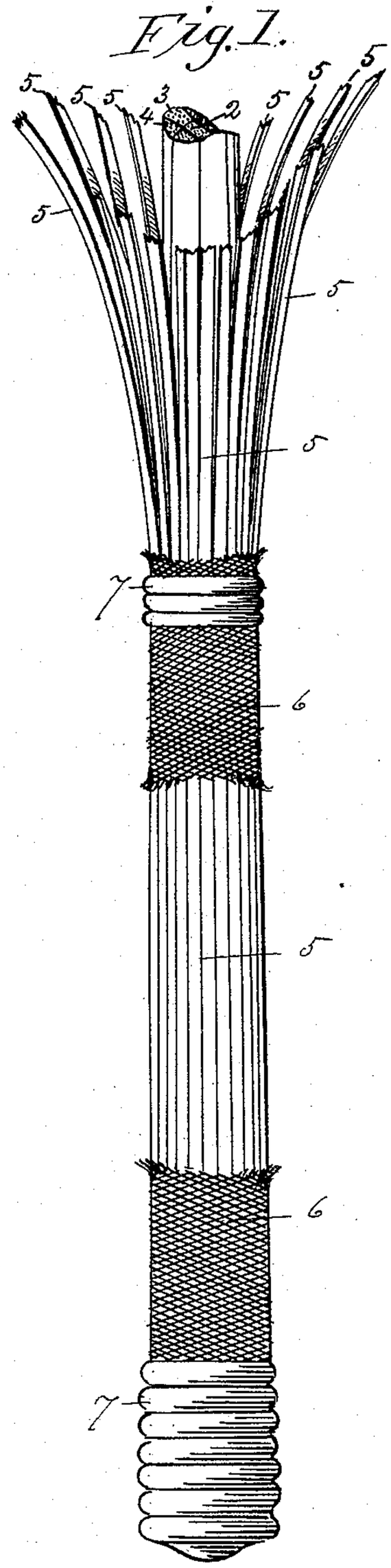


Fig. 3.

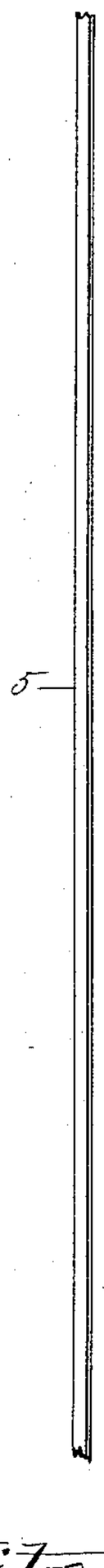


Fig. 2.

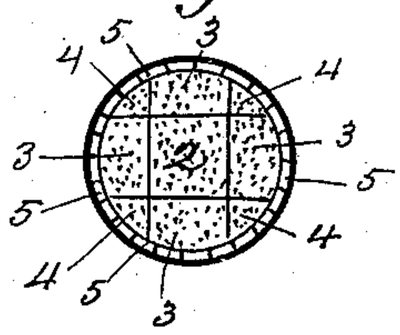
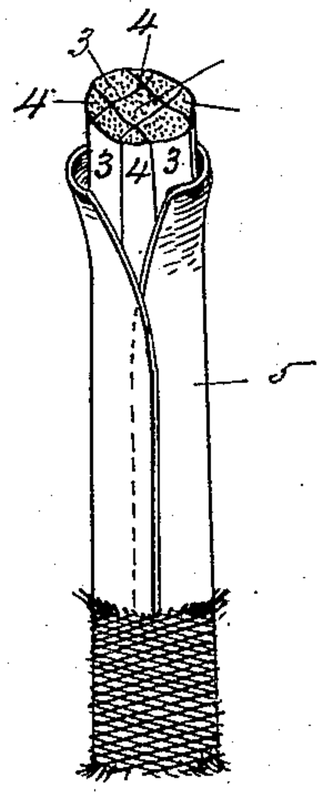


Fig. 4.



Witnesses:
J. L. Caughey
G. M. Chamberlain.

Inventor
Geo. E. Whipple
By Chapin & Co
Attys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GEORGE E. WHIPPLE, OF WESTFIELD, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO JAMES NOBLE, JR., OF SAME PLACE.

WHIP.

SPECIFICATION forming part of Letters Patent No. 452,327, dated May 12, 1891.

Application filed October 10, 1890. Serial No. 367,660. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. WHIPPLE, a citizen of the United States, residing at Westfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Whips, of which the following is a specification.

This invention relates to whips, and has for its object an improved construction in relation to that part thereof which is termed the "whip-lining"—that is to say, the part which lies directly against and envelops the rattan or other internal whip-body, and which in turn is entirely enveloped by the outer or plaited covering of the whip, all as hereinafter fully described.

In the drawings forming part of this specification, Figure 1 is a side elevation of the lower portion of a whip—that is to say, the handle or butt part thereof and a portion of the same extending beyond said handle, having a lining applied thereto according to my invention—said figure showing the plaiting removed from a portion of the whip-handle, and from the most of that part of the whip above the handle in order to make clear the disposition and application of said lining to a whip. Fig. 2 is a transverse sectional view of the whip including the center piece, the sidings, the chuck-pieces, the lining, and the plaiting. Fig. 3 illustrates a strip of the lining material below described. Fig. 4 is a side elevation of a part of a whip, showing the above-mentioned inner parts which constitute the whip body or stock and a modified arrangement of the lining material above referred to, said lining in this figure being shown partly enveloped by plaiting.

In the drawings, 2 indicates the center piece or core of the whip; 3, the sidings; 4, the chuck-pieces; 5, the lining; 6, the plaiting, and 7 the "whip-buttons." The said whip-core 2 is in practice either a compound or a single element—that is to say, it is oftentimes made of rattan and rawhide or other similar elastic parts; but in this instance it is shown as made of a single piece of material, and that in the construction herein described is preferably rattan, for the reason that it is elastic and comparatively inexpensive, and when combined in a whip with the within-described improved lining and with the usual rattan whip-body construction an excellent whip is produced at a moderate price.

It is obvious that by using a compound core, as described, with the same lining a correspondingly improved whip may be made.

The sidings 3 of the whip, also of rattan strips, are, like the said core 2, ordinarily of rectangular form in cross-section, (excepting that their outer sides are slightly curved,) and are applied directly against the sides of the core. The chuck strips or pieces 4 are likewise of rattan and are fitted into and fill the corners between said sidings, and the latter are solidly cemented to the core, and the chuck-pieces are connected in like manner to the sidings in the positions clearly shown in Figs. 2 and 4, thus making a solid whip-body construction. Said body is then rounded and given the proper form, and is smoothed and finished in the ordinary manner preparatory to the application of the whip-lining 5 thereto. The said whip-lining 5 extends in practice upward around the whip-body from the handle part to or nearly to the tip of the whip, and consists of the pyroxyline material known as "celluloid." This is shown in Fig. 1 as applied in strips to the sides of the whip-body under the usual braided plaiting 6, and is tightly bound thereon by the latter. Said strips extend longitudinally of the whip and are preferably arranged edge to edge around the same, the result of which arrangement being that said strips are brought to such positions relative to each other as renders them co-operative in offering the best elastic resistance to the flexure of the whip. As above stated, said lining-strips 5, of celluloid, are tightly bound around the whip by the overlaying plaiting 6; but they are preferably further secured against the surface of the whip-body by glue or a suitable similar cement applied between the strips and the body, thereby constituting said strips more nearly a part of the whip-body and tending to improve their efficiency as an important elastic element thereof. The said celluloid lining may, if desired, be applied to the whip-body in sheet form, as shown in Fig. 4, the said sheet enveloping the body and so arranged that its edges either overlap or are brought

edge to edge, and being secured to the whip-body under the plaiting in the manner of securing the said strips of celluloid, as described above.

The lining applied in the form of a series of strips of celluloid, as shown in Fig. 1, is found in practice to be preferable, inasmuch as a whip is thereby produced possessing the most desirable springy and flexible qualities.

The nature of celluloid peculiarly adapts it to use as a whip-lining for the following reasons: It is elastic to a high degree, and when bent or sprung by the quick downward stroke of the whip it has a sharp reflex action, and it is impervious to dampness, and therefore the elastic action thereof as a whip-lining is the same whether the whip be dry or shall have been exposed to severe rain, and it serves to protect the body of the whip which it incloses against deterioration from moisture, thus greatly increasing the durability thereof and preserving it in the best condition for use.

From an economical point of view the advantages derived from the use of celluloid as a whip-lining is very important, for it is supplied to whip-makers at less than one-fifth of the price of whalebone, and a whip embodying it as a lining element in the manner herein described possesses the well known characteristics of a whalebone-whip to such a degree that it cannot be distinguished from the latter.

It is obvious that the above-described celluloid lining is adapted to be advantageously used with any suitably constructed whip-body, and therefore its use is in no way limited to a whip-body of any specific construction.

What I claim as my invention is—

1. A whip consisting of a suitable body, an outer plaited covering, and a lining consisting of strips of celluloid laid longitudinally on said body and enveloping the same, interposed between said body and outer covering, substantially as set forth.

2. A whip consisting of a suitable body, an outer plaited covering, and a lining consisting of strips of celluloid laid longitudinally on said body with their edges abutting, interposed between said body and outer covering, substantially as set forth.

GEORGE E. WHIPPLE.

Witnesses:
A. F. LILLEY,
R. A. BROWN.