F. W. HUPPELSBERG.
Double Winged Plaited Cord.

No. 200,303. Patented Feb. 12, 1878.

Fig.1.

Fig.2.

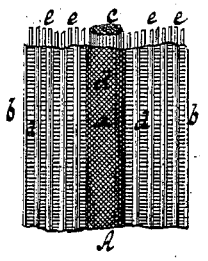
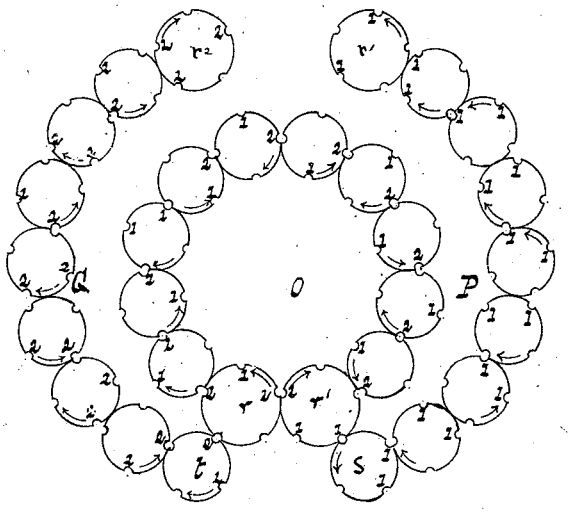


Fig.3.



Witnesses
Otto Schupland.
Chas Wahlers

Inventor:
Friedrich Wm Huppelsberg
by
Van Santvoord & Hauff
his attorneys

UNITED STATES PATENT OFFICE.

FRIEDRICH W. HUPPELSBERG, OF BROOKLYN, NEW YORK, ASSIGNOR TO STEINBORN & HUPPELSBERG, OF SAME PLACE.

IMPROVEMENT IN DOUBLE-WINGED PLAITED CORD.

Specification forming part of Letters Patent No. **200,303**, dated February 12, 1878; application filed June 20, 1877.

To all whom it may concern:

Be it known that I, FRIEDRICH W. HUPPELSBERG, of the city of Brooklyn, county of Kings, and State of New York, have invented a new and Improved Double-Winged Plaited Cord, which invention is set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a transverse section. Fig. 2 is a side view of the same. Fig. 3 is a diagram of the machine which I use in producing my double-winged plaited cord.

Similar letters indicate corresponding parts.

This invention relates to an improvement upon the patent granted to me June 19, 1877; and consists in a plaited cord provided with braided wings projecting from its sides, each of said wings being produced of a series of longitudinal threads covered by one-half of the threads which are used for plaiting the body of the cord, thereby producing a plaited cord which can be readily attached to the edge of a garment or other article by folding the wings over said edge and securing the whole together by stitching or other means.

In the drawing, the letter A designates my double-winged cord, which consists of a round or cylindrical body, *a*, and two wings, *b b*, projecting from its sides, said cylindrical body having the appearance of a cord of that class which is usually employed for ornamenting and protecting the edges of garments or of other articles.

The cylindrical body *a* consists of a bunch of parallel or warp threads, *c*, which may be loose or twisted together, and which are covered by the braiding-threads *d*, while the flat wings *b b* consist each of a series of warp-threads, *e*, which run parallel to the warp-threads *c* of the cylindrical body, and which are covered each by one-half of the same braiding-threads *d*, which also cover the bunch of warp-threads *c*. Both operations—that of plaiting the round cord or cylindrical body, and also that of making flat braids—are well known, and are performed on an ordinary braiding-machine; but I have combined both operations into one, so that one half of the braiding-threads *d*, all of which serve to plait the cylindrical body, are used to unite the warp-threads *e* of one wing, and the other half those of the other wing.

The manner in which the combination of the ordinary machine for plaiting round cords and for making flat braids is combined is illustrated in Fig. 3. In this diagram the letter O designates an ordinary machine for plaiting round cords, in the disks of which work the jacks 1 2.

In the example shown in the drawing all the disks contain four notches, with the exception of four disks, r^1 r^2, each of which contains five notches. From the disks r^1 the jacks 1 pass into the disk *s* of a machine, P, for making flat braids, and from the disk r^2 the jacks 2 pass into the disk *t* of a second machine, Q, for making flat braids. The threads carried by the jacks 1 therefore form the braid or wing on one side of the cylindrical body or cord *a*, and the threads carried by the jacks 2 form the braid or wing on the opposite side of the cylindrical body, while the threads carried by all the jacks 1 2 serve to plait said cylindrical body.

This combination of three machines, O P Q, forms the subject-matter of a separate application, and I do not give, therefore, a detailed description of the same in this specification; but the general operation of this combination machine will be readily understood from the diagram.

The great advantage of my double-winged cord will be readily appreciated by tailors, dressmakers, upholsterers, and others.

If an ordinary round cord is to be attached to the edge of a garment, the tailor or dressmaker has to stitch through the cord—an operation which cannot be performed on a sewing-machine.

My double-winged cord can be secured in the same manner as an ordinary braid by folding the two wings over the edge of the garment and stitching through the whole, and when secured it combines the advantages of a cord and of a braid. My double-winged cord can also be used on furniture or other articles.

What I claim as new, and desire to secure by Letters Patent, is—

As a new article of manufacture, the double-winged plaited cord herein described, all being formed in one piece, the two braided wings projecting from the opposite sides of the plaited cord, as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 14th day of June, 1877.

F. W. HUPPELSBERG. [L. S.]

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.