(Specimens.)

2 Sheets—Sheet 1.

J. McCAHEY.

BRAID.

No. 377,320. Patented Jan. 31, 1888.

FIG. 1.

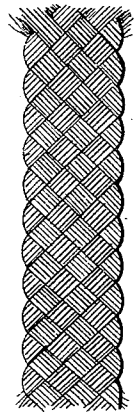


FIG. 2.



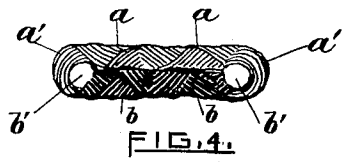


FIG. 4.

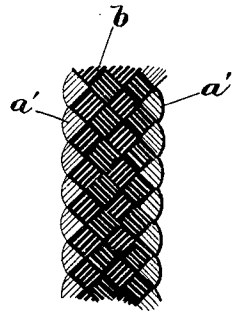


FIG. 3.

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(Specimens.)

2 Sheets—Sheet 2.

J. McCAHEY.

BRAID.

No. 377,320. Patented Jan. 31, 1888.

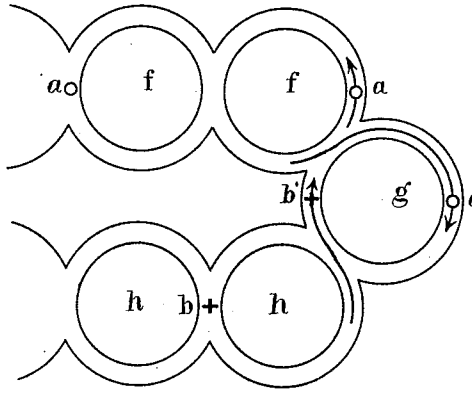


Fig. 5.

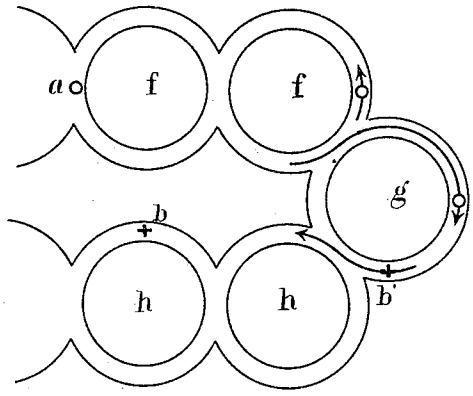


Fig. 6.

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UNITED STATES PATENT OFFICE.

JOHN McCAHEY, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO THE NEW ENGLAND BUTT COMPANY, OF SAME PLACE.

BRAID.

SPECIFICATION forming part of Letters Patent No. 377,320, dated January 31, 1888.

Application filed June 6, 1887. Serial No. 240,401. (Specimens.)

To all whom it may concern:

Be it known that I, JOHN McCAHEY, of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Braids; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to that class of braids known as "diamond braids," in which, instead of "one strand passing over two," as in common braids, "one strand passes over one," producing a distinct diamond figure of each strand that shows on the surface of the braid.

The improvement consists in the construction of a double flat diamond braid, to be used for trimmings, suspender-loops, &c., that shall show on its face and edges one material—such as silk or mohair, for instance—and on its back some other material that costs less, such as cotton. At the same time that the cheaper material constitutes a large portion of the fabric, thereby reducing its cost very materially, it will still retain its fine appearance and be of equal durability.

Figure 1 shows the face side of the braid. Fig. 2 is an edge view of the same. Fig. 3 shows the back or under side. Fig. 4 is a cross-section showing the arrangement of the strands. Figs. 5 and 6 are diagrams explanatory of the positions of the spool-carriers.

The strands *a a a'* are braided with each other, "one over one," on one side of the machine by themselves, and the strands *b b b'* are in like manner braided with each other on the other side of the machine. As each carrier with its spool and strand *a* braids across the front of the braid and comes to the edge, it there passes around a plate common to both the front and back sets of strands, and the back carriers with their spools and strands *b* also, each one after braiding across the back of the braid, comes to the plate at the edge and passes around it. Now, as both sets of strands *a* and *b* pass around the same plate at each edge every time a carrier with its spool and strand arrives there, of course those strands *a* and *b* so passing around will be braided one over the other, and by setting the carrier with its spool and the strand *b'* so as to come first on the outside of the plate at the edge around which both sets *a* and *b* pass, that strand *b'* will lie under that (*a'*) of the other carrier which goes around the outside of the plate after the carrier with the *b'* strand. This may be more readily understood by reference to Figs. 5 and 6, which are diagrams of that part of the courses of the spool-carriers in which the effect is produced. The carriers *a* are confined to the courses around the plates *f f*, except when they come to the edge plate, *g*, around which they pass and return to the plates *f f*. The carriers *b* are confined to the courses around the plates *h h*, except when they come to the edge plate, *g*, around which they also pass and return to the plates *h*. I will suppose the carriers *a* carry silk thread and the carriers *b* cotton thread. So far the explanation applies to both Figs. 5 and 6. Now, if the two sets of carriers *a* and *b* are placed in the usual way, so as to come opposite to each other in going around plate *g*, as in Fig. 5, the threads of silk and cotton will be laid around the edge at equal distances apart and will show silk and cotton threads alternately on the edge of the braid; but if the two sets of carriers *a b* are placed so as to come quartering to each other as they pass around the edge plate, *g*, as in Fig. 6, the silk-carrier *a'* will follow the cotton-carrier *b'* so closely (within a quarter-turn) that the silk thread will be laid over the cotton thread, while the next cotton-carrier will be three-fourths of a turn, or three times as far behind the last silk-carrier, which distance—three-fourths of a turn—allows the feed motion to draw up the braid, so that the cotton thread will be laid separate from the last silk thread and in position to be covered by the next silk thread, as above described. These diagrams Figs. 5 and 6 show the formation of one edge only of the braid; but the other edge is made in the same way, and the number of plates *f* and *h* between the two edge plates, *g*, depends on the width of the braid to be made.

Having thus described my improvements, what I claim as my invention is—

1. A double flat diamond braid having one face and the two edges of one material and the back of another material, substantially as and for the purpose set forth.

2. A double flat diamond braid constructed of two sets of strands, one set of which constitutes one side or face and the two edges of the braid and the other set constitutes the other side or back of the braid, substantially as herein specified.

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Witnesses:
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